

BRITISH OFFICES LIFE TABLES, 1893

TABLES

DEDUCED FROM THE

GRADUATED EXPERIENCE

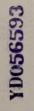
OF

WHOLE-LIFE PARTICIPATING ASSURANCES

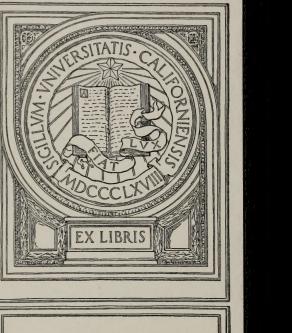
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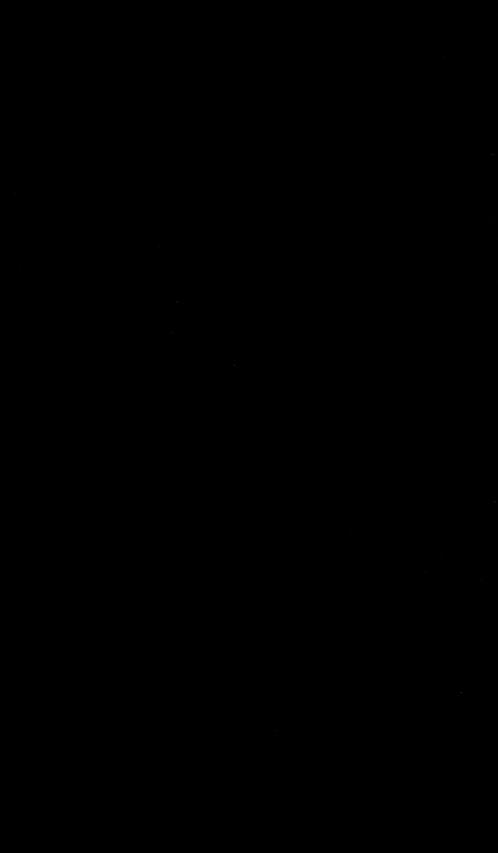
MALE LIVES

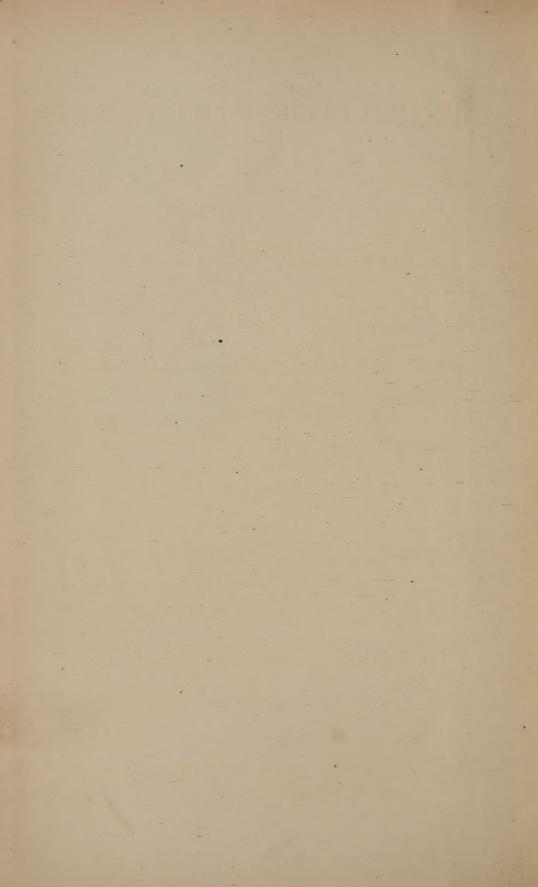
AGGREGATE TABLES











BRITISH OFFICES LIFE TABLES

(1893).

TABLES

ERRATUM.

TEMPORARY ANNUITIES -0^M-3 PER CENT.

p. 63. $\alpha_{41.\overline{36}|}$ For 19.652 read 16.652.

R

THE FACULTY OF ACTUARIES IN SCOTLAND.

LONDON:
CHARLES AND EDWIN LAYTON,
56, FARRINGDON STREET, E.C.

1902.

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BRITISH OFFICES LIFE TABLES

(1893).

TABLES

DEDUCED FROM THE

GRADUATED EXPERIENCE

OF

WHOLE-LIFE PARTICIPATING ASSURANCES

ON

MALE LIVES.

AGGREGATE TABLES.

COMPUTED AND PUBLISHED ON THE AUTHORITY AND UNDER
THE SUPERINTENDENCE OF

THE INSTITUTE OF ACTUARIES

AND

THE FACULTY OF ACTUARIES IN SCOTLAND.

LONDON:
CHARLES AND EDWIN LAYTON,
56, FARRINGDON STREET, E.C.

1902.

THE

INSTITUTE OF ACTUARIES' AND FACULTY OF ACTUARIES' JOINT COMMITTEE ON MORTALITY INVESTIGATION.

CHAIRMAN OF JOINT COMMITTEE:

R. P. HARDY.

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A. F. BURRIDGE, Honorary Secretaries of Joint Committee, and of London Section.

Peg. SSTRS GIFT Thomson

HG 8784 G5I53

INTRODUCTION.

THE Tables included in the present volume are based upon graduated Mortality Tables in respect of that principal section of the British Offices Life Tables, 1893, which represents the experience of Male Lives assured under Whole Life Participating Policies. They comprise the graduated full Aggregate Table—O^M—and the truncated Aggregate Table, excluding the experience of the first five years following the date of assurance—O^{M(5)}—with Monetary Tables at different rates of interest deduced from those Mortality Tables respectively. The O^{M(5)} Mortality Table, and the monetary and other values deduced from that Table, are throughout printed on tinted paper.

The OM(5) Table has been graduated by Mr. G. F. HARDY, by the application of Makeham's first modification of Gompertz's law, employing one set of constants throughout, the values of which are specified on page 105. The "Law of Uniform Seniority" therefore applies at all ages under this Table. Tables of Uniform Seniority are included on pages 244 to 251, from which equal ages can be deduced in respect of any two, three, or four joint lives, and on pages 254 to 275, values of annuities at such equal ages are tabulated at three rates of interest. It is hoped that the examples on page 252 will sufficiently illustrate and explain the use of these Tables of Uniform Seniority and of Annuities at equal ages.

The O^M Table has been adjusted by a method to which the "Law of Uniform Seniority" does not apply: the formula for the curve is given on page 1. For this reason Tables of the values of annuities on two joint lives of all ages have been computed at different rates of interest, and are included in the present volume.

The Mortality by the O^M and $O^{M(5)}$ Tables is identical after age 84; and the radix of the $O^{M(5)}$ Table has been so taken as to produce, at the older ages, elementary values and deduced functions identical with those of the O^M Table. To the extent to which the figures are here tabulated, they are, in fact, identical under the two Tables at ages somewhat younger than 85.

In order to preserve consistency in the form of tabulation with the Select or Extended Mortality and Monetary Tables which are in course of preparation, the Joint Committee have decided to adopt throughout the Tables, the "open" or "initial" form of $\mathbb{N}_x = \mathbb{D}_x + \mathbb{D}_{x+1} + \ldots$ and also of $\mathbb{S}_x = \mathbb{N}_x + \mathbb{N}_{x+1} + \ldots$ A note has been added upon each page which includes these values or their logarithms, directing special attention to the form of tabulation adopted. The Expectations of Life as tabulated on pages 2, 3, 106 and 107, are throughout curtate.

The ratios of the annuities-due at each age, as deduced from comparison of the H^M or $H^{M(s)}$ Tables with the O^M or $O^{M(s)}$ Tables, are set out at three rates of interest on pages 210 to 212, and will, it is hoped, be found useful in enquiries as to the relations of the policy-values under those Tables. The notes appended to these Tables of Ratios illustrate their practical application in the cases specified.

The Select or Extended Mortality Table, based upon the SELECT data for Whole-Life Participating Assurances on Male Lives (also graduated by Mr. G. F. HARDY) and the Monetary values deduced therefrom, now in course of preparation, will be published in a separate volume. It is hoped also to include in that volume, an account of the processes and methods followed in the construction and graduation of the Mortality Tables, and an explanation of any special methods adopted in the computation of the Monetary Values deduced therefrom.

C. D. HIGHAM,
President of the Institute of Actuaries.

GEO. M. LOW,

President of the Faculty of Actuaries in

Scotland.

30th May, 1902.

SYNOPSIS OF TABLES.

C . FORH ANGEMENTS ANGELS
Rate of Interest per-cent
deT deT co co to to to
pp. pp. pp. pp.
2-3
$\log \langle x, \log d_x, \log \rho_x, \log \mu_x, \cot \lambda_x, \cot \rho_x + -5 \dots \dots \dots$
8-9 16-17 24-25
10-11 18-19 26-27 44-45
12-13 20-21 28-29 46-47 56-57
12-13 20-21 30-31 48-49
28-29 46-47 56-57
30-31 48-49 58-59
32-40
210
214-22
:
:
:



BRITISH OFFICES LIFE TABLES, 1893.

WHOLE-LIFE PARTICIPATING ASSURANCES MALE LIVES.

$\mathbf{0}^{\mathtt{M}}$

FULL AGGREGATE DATA.

GRADUATED MORTALITY TABLE,

Formula employed in graduating OM Table:-

$$\Delta \operatorname{col}_{10} (p_x)^{\mathrm{OM}} = \Delta \operatorname{col}_{10} (p_x)^{\mathrm{OM}(5)} + \phi_x$$

$$\operatorname{col}_{10}(p_x)^{\mathrm{OM}} = \operatorname{col}_{10}(p_x)^{\mathrm{OM}(5)} - \Sigma_x^{\omega} \phi_x$$

where $\phi_x = 0000504e^{-0032\log_e 10(29-x)^2} + 0000115e^{-0000\log_e 10(66\cdot 5-x)^2}$

OM

ELEMENTARY VALUES

OM

.v	l_x	d_x	p_x	q_x	μ_x	e_x	x
		_					
10 11	99 662	338 340	.996 59	°003 38	°003 37	51°459 50°634	10
12	99 322	343	996 55	003 45	'003 44	49.806	12
13	98 979	346	*996 50	003 50	003 48	48.450	13 14
14	98 633	349	• 996 46	'003 54	003 52	48.152	15
15 16	98 284	354 359	°996 40	°003 60 °003 67	°003 57	47°323 46°493	16
17	97 930	366	996 25	.003 75	'003 72	45.665	17
18	97 205	372	'996 17	.003 83	'003 80	44.836	18
19	96 833	380	·996 o8	.003 92	.003 88	44.009	19
20	96 453	390	995 96	004 04	.003 99	43.182	20
21 22	96 063	400 412	°995 84 °995 69	°004 16	°004 11	42°357 41°535	22
23	95 003	425	995 54	004 46	004 39	40'715	23
24	94 826	439	995 37	*004 63	'004 55	39.896	24
25	94 387	454	995 19	·004 81	.004 73	39.083	25
26	93 933	470	995 00	*005 00	'004 91	38.271	26 27
27 28	93 463	489 506	'994 77 '994 56	°005 23	°005 13	37°464 36°661	28
29	92 974	526	'994 31	005 69	.002 28	35.861	29
30	91 942	547	'994 05	*005 95	.005 84	35.067	30
31	91 395	567	.993 80	.000 50	.006 00	34'277	31
32	90 828	589	993 52	006 48	006 36	33'490	32
33	90 239 89 628	633	993 23	007 06	*006 65 *006 94	31.935	34
35	88 995	657	992 62	.007 38	007 25	31.120	35
36	88 338	681	992 02	007 71	007 57	30,331	36
37	87 657	705	.991 96	*008 04	'007 91	29.626	37
38	86 952	729	991 62	*008 38 *008 77	008 24	28.867	38
	86 223	756	'991 23				
40	85 467 84 685	782 810	'990 85 '990 44	°009 15	009 00	27.360	40
42	83 875	840	989 99	.010 01	009 83	25.840	42
43	83 035	870	989 52	.01048	'010 29	25.131	43
44	82 165	903	.089 01	,010 99	'010 79	24'397	44
45	81 262	937	988 47	.011 23	011 32	23.668	45
46	80 325	974	·987 87 ·987 23	012 13	°011 89	22.342	46
48	79 351 78 338	1054	986 55	012 //	013 19	21.213	48
49	77 284	1 099	985 78	014 22	'013 92	20.807	49
50	76 185	1 146	.984 96	015 04	01473	20'107	50
51	75 039	1 197	'984 05	.012 92	015 61	19'414	51
52 53	73 842	1 250	'983 07 '982 01	017 99	016 56	18.729	52 53
54	72 592	1 367	980 82	.019 18	017 00	17.382	54

OM

ELEMENTARY VALUES

 0^{M}

x	l_x	d_x	p_x	q_x	μ_x	e_x	x
.55	69 919	1 430	'979 55	020 45	'020 00	16.722	55
56	68 489	1 496	979 33	021 84	.021 32	16.071	56
57	66 993	1 566	976 62	.023 38	.022 84	15.430	57
58	65 427	1 639	974 95	025 05	.024 48	14.799	58
59	63 788	1 715	974 93	.026 89	026 29	14'179	59
				-	.028 24		
60	62 073 60 281	1 792	971 13	.028 87		13.271	60
62		1872	°968 95	'031 05	.030 39	12.974	61
63	58 409	1 953	966 56	'033 44	032 74	12.390	62
64	56 456	2 0 3 4	963 97	036 03	.032 31	11.819	63
	54 422	2 115	.961 14	•038 86	.038 15	11.501	64
65	52 307	2 195	.958 04	·041 96	'041 21	10.416	65
66	50 112	2 27 1	·954 68	.042 32	*044 57	10.182	66
67	47 841	2 344	.951 00	'049 00	.048 22	9.669	67
68	45 497	2 411	'947 01	.022 99	.022 28	9.167	68
69	43 086	2 471	942 65	·o57 35	.026 69	8.680	69
70	40 615	2 521	'937 93	.062 07	.061 20	8.208	70
71	38 094	2 561	'932 77	.067 23	.066 76	7.751	71
72	35 533	2 587	'927 19	.07281	'072 50	7.310	72
73	32 946	2 600	921 08	.078 92	.048 80	6.884	73
74	30 346	2 594	914 52	·085 48	.085 68	6.474	74
75	27 752	2 571	.907 36	·092 64	.093 18	6.079	75
76	25 181	2 529	899 57	100 43	101 40	5.700	76
77	22 652	2 465	.891 18	.108 85	.11038	5.336	77
78	20 187	2 381	.882 05	117 95	120 21	4.988	78
79	17806	2 276	.872 18	127 82	130 95	4.654	79
80	15 530		·861 56	138 44	142 71		80
81	13 380	2 150	.850 00	130 44	155 56	4'337	81
82	11 373	1 847	.837 60	162 40	169 63	4.033	82
83	9 5 2 6	1 674	.824 27	102 40	185 01	3.745	83
84	7 852	1 493	·809 86	190 14	20185	3.471 3.511	84
				-			
85	6 359	1 308	794 31	.205 69	220 26	2.965	85
86	5051	I 122	.777 87	222 13	'240 40	2.733	86
87	3 929	943	759 99	'240 01	262 44	2.214	87
88	2 986	773	741 13	258 87	286 54	2.308	88 89
89	2 213	617	721 19	.27881	'31291	2'114	
90	1 596	480	699 25	.300 72	*341 76	1.031	90
91	1116	360	677 42	'322 58	373 32	1.762	91
92	756	263	652 12	'347 88	'407 84	1,601	92
93	493	183	.628 80	371 20	445 60	1.454	93
94	310	124	.600 00	'400 00	·486 92	1.313	94
95	186	79	575 27	42473	532 11	1,188	95
96	107	49	*542 06	*457 94	*581 56	1.062	96
97	58	28	'517 24	.482 76	.635 64	.966	97
98	30	15	.200 00	.200 00	.69481	.867	98
99	15	8	.466 67	533 33	759 54	'733	99
100	7	4	428 57	571 43	.830 35	.571	100
101	3	2	333 33	.666 67	.907 82	333	101
102	I	I	,000 00	1,000 00	'992 56	.000	102

OM

ELEMENTARY VALUES

OM

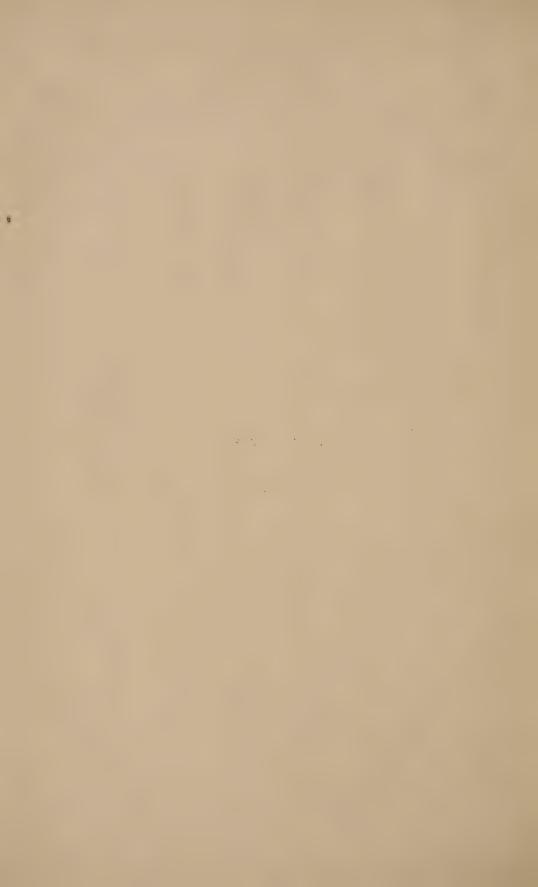
$\log l_x$	$\log d_x$	$\log p_{x'}$	$\log \mu_x$	$\operatorname{col} l_x$	$\operatorname{col} p_x$	x
5.000 00 4.998 53 .997 05 .995 54 .994 02	2*528 92 *531 48 *535 29 *539 08 *542 83	7.998 53 998 52 998 49 998 48 998 46	3.527 52 .531 56 .536 24 .541 65 .546 73	5'000 00 '001 47 '002 95 '004 46 '005 98	'001 47 '001 48 '001 51 '001 52 '001 54	10 11 12 13 14
'992 48 '990 92 '989 32 '987 69 '986 02	549 00 555 09 563 48 570 54 579 78	998 44 998 40 998 37 998 33 998 30	553 24 560 94 569 96 579 24 588 77	'007 52 '009 08 '010 68 '012 31 '013 98	'001 56 '001 60 '001 63 '001 67	15 16 17 18 19
984 32 982 56 980 74 978 87 976 93	'591 06 '602 06 '614 90 '628 39 '642 46	998 24 998 18 998 13 998 06 997 98	600 96 613 86 627 52 642 65 658 39	'015 68 '017 44 '019 26 '021 13 '023 07	'001 76 '001 82 '001 87 '001 94 '002 02	20 21 22 23 24
'974 91 '972 82 '970 64 '968 36 '965 99	657 06 672 10 689 31 704 15 720 99	'997 91 '997 82 '997 72 '997 63 '997 52	.691 51 .710 07 .728 36 .746 38	°027 18 °029 36 °031 64 °034 01	'002 18 '002 28 '002 37 '002 48	25 26 27 28 29
'963 51 '960 92 '958 22 '955 39 '952 44	737 99 753 58 770 12 786 04 801 40	'997 41 '997 30 '997 17 '997 05 '996 93	784 87 803 58 822 75 841 24	°039 08 °041 78 °044 61 °047 56	°002 59 °002 70 °002 83 °002 95 °003 07	30 31 32 33 34
'949 37 '946 15 '942 79 '939 28 '935 62	*817 57 *833 15 *848 19 *862 73 *878 52	*996 78 *996 64 *996 49 *996 34 *996 18	*860 b8 *879 28 *897 94 *916 09 *934 98	°050 63 °053 85 °057 21 °060 72 °064 38	003 22 003 36 003 51 003 66 003 82	35 36 37 38 39
'931 80 '927 81 '923 63 '919 26 '914 69	'893 21 '908 49 '924 28 '939 52 '955 69	'996 o1 '995 82 '995 63 '995 43 '995 20	'954 08 '972 92 '992 74 2'012 58 '032 83	.068 20 .072 19 .076 37 .080 74 .085 31	'003 99 '004 18 '004 37 '004 57 '004 80	40 41 42 43 44
'909 89 '904 85 '899 55 '893 97 '888 09	'971 74 '988 56 3'005 61 '022 84 '041 00	'994 96 '994 70 '994 42 '994 12 '993 78	°053 74 °075 19 °097 47 °120 12 °143 72	'090 11 '095 15 '100 45 '106 03	°005 04 °005 30 °005 58 °005 88 °006 22	45 46 47 48 49
·881 87 ·875 29 ·868 30 ·860 89 ·853 00	°059 18 °078 09 °096 91 °115 94 °135 77	'993 42 '993 01 '992 59 '992 11 '991 60	168 12 193 27 219 16 245 42 272 78	118 13 124 71 131 70 139 11 147 00	006 58 006 99 007 41 007 89 008 40	50 51 52 53 54
	5.000 00 4.998 53 .997 05 .995 54 .994 02 .992 48 .990 92 .989 32 .987 69 .984 32 .982 56 .986 02 .984 32 .982 56 .986 74 .978 87 .976 93 .974 91 .972 82 .976 93 .975 39 .965 99 .963 51 .960 92 .958 22 .955 39 .952 44 .949 37 .946 15 .942 79 .939 28 .935 62 .931 80 .927 81 .923 63 .919 26 .914 69 .909 89 .904 85 .899 55 .893 97 .888 09 .881 87 .875 29 .868 30 .866 89	5'000 00 2'528 92 4'998 53 '531 48 '997 05 '535 29 '995 54 '539 08 '994 02 '542 83 '549 00 '990 92 '555 09 '989 32 '563 48 '987 69 '570 54 '579 78 '984 32 '591 06 '982 56 '602 06 '980 74 '614 90 '978 87 '628 39 '976 93 '642 46 '974 91 '657 06 '672 82 '672 10 '976 83 6 '704 15 '965 99 '753 58 '958 22 '770 12 '955 39 '960 92 '753 58 '958 22 '770 12 '955 39 '786 04 '801 40 '949 37 '817 57 '946 15 '833 15 '942 79 '848 19 '939 28 '862 73 '935 62 '878 52 '931 80 '893 21 '927 81 '908 49 '923 63 '939 52 '914 69 '955 69 '909 89 '971 74 '988 56 '899 55 '914 69 '955 69 '991 '888 09 '041 00 '881 87 '059 18 '078 09 '868 30 '096 91 '115 94	5'000 00 2'528 92 7'998 53 998 52 997 05 531 48 998 52 998 49 998 54 9995 54 539 08 998 48 9995 54 539 08 998 46 9996 92 5555 09 998 40 998 37 987 69 570 54 998 33 988 02 570 78 998 30 988 48 998 76 988 76 988 76 998 78 76 998 78 76 998 78 76 998 78 76 998 78 76 998 79 998 998	5'000 00 2'52'8 92 7'998 53 3'527 52'531 56'997 55'535 29'998 49'536'24'995 54'539 08'998 46'546'73'995 54'599 2'555 09'998 46'560 94'999 2'555 09'998 40'560 94'989 32'563 48'998 37'569 96'989 32'563 48'998 37'569 96'986'02'579 78'998 33'579 24'986'02'579 78'998 33'579 24'600 96'98 49'560 94'600 96'98 13'627 52'978 87'628 39'998 18'613 86'980 74'614 90'998 13'627 52'976 93'642 46'997 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'658 39'97 98'63'76 93'63 7'764 75'972 82'672 10'997 82'69151'760 7972 82'672 10'997 82'710 07'968 36'704 15'997 63'728 36'965 99'752'764 88'997 997 52'746 38'997 30'748 48'796 997 997 17'88 36'955 39'786 04'997 95'822'770 12'997 17'88 35'88'975 39'786 04'996 93'841 24'949 37'818 54'814 09'996 93'841 24'949 37'818 54'814 09'996 93'841 24'949 37'818 54'814 09'996 93'841 24'949 37'818 54'814 09'996 93'841 24'949 37'818 54'814 09'996 93'841 24'997 98'81 996 49'996 995 82'972 92'997 81'996 64'997 98'997 81'996 64'997 98'997 81'996 995 82'972 92'997 81'996 64'997 98'997 997 997 997 997 997 997 997 997 997	5'000 00 2'528 92 7'998 53 3'527 52 5'000 00 0'01 47 0'01 47 0'02 95 0'01 47 0'02 95 0'01 47 0'02 95 0'01 47 0'02 95 0'01 47 0'02 95 0'01 47 0'02 95 0'01 47 0'02 95 0'04 46 0'02 95 0'04 46 0'02 95 0'04 46 0'02 95 0'04 46 0'02 95 0'04 46 0'02 95 0'04 46 0'05 98 0'04 46 0'05 98	\$\begin{array}{c c c c c c c c c c c c c c c c c c c

 0^{M}

ELEMENTARY VALUES

 0^{M}

x	$\log l_x$	$\log d_x$	$\log p_x$	$\log \mu_x$	$\operatorname{col}l_x$	$\operatorname{col} p_x$	x
	1001160	2:155.24	1.001 02	2.300 93	5.122 40	98 800	55
55	4.844 60	3.122 34	1				56
56	.835 62	174 93	990 41	329 45	*164 38	*009 59	
57	·826 o3	194 79	'989 73	·358 78	173 97	°010 27	57
58	.815 76	'214 58	·988 98	. 388 90	°184 24	'01102	58
59	.804 74	*234 26	·988 16	41971	195 26	'01184	59
60	'792 90	*253 34	·987 28	°450 91	*207 10	01272	60
	·780 18	272 31	986 30	482 67	21982	'013 70	61
61					233 52		62
62	.766 48	'290 70	985 23	515 10		014 77	63
63	.751 71	.308 32	·984 o6	547 91	*248 29	°015 94	
64	735 77	'325 31	982 79	.281 16	*264 23	'017 21	64
65	.718 56	'341 43	·981 38	.614 97	.281 44	'018 62	65
66	699 94	356 22	·979 86	.649 06	.300 06	'020 14	66
	679 80	369 96	978 18	.683 48	320 20	021 82	67
67				718 34	342 02	021 62	68
68	657 98	382 20	976 36				69
69	.634 34	*392 87	974 35	'753 4 ⁸	•365 66	*025 65	
70	.608 69	'401 57	972 17	.788 85	.301 31	02783	70
71	·58o 86	°408 41	969 77	.824 49	'419 14	'030 23	71
72	.550 63	412 80	*967 17	·860 35	'449 37	.032 83	72
73	517 80	414 97	.964 30	·896 53	482 20	.035 70	73
74	'482 10	'413 97	.961 19	932 87	517 90	°03881	74
1						_	
75	443 29	41010	957 78	-969 32	.226 71	042 22	75
76	'401 07	°402 95	954 04	1.000 04	598 93	*045 96	76
77	355 11	'391 82	·949 96	*042 89	644 89	050 04	77
78	'305 07	376 76	'945 50	'079 94	·694 93	'054 50	78
79	250 57	357 17	.940 60	11711	'749 43	.059 40	79
		1			.808 83	.064 71	80
80	191 17	332 44	935 29	154 45			81
81	126 46	302 55	929 42	.191 90	·873 54	*070 58	
82	.022 88	'266 47	923 03	*229 50	_ 944 12	*076 97	82
83	3.978 91	'223 76	916 07	'267 20	4.021 09	.083 93	83
84	·894 98	174 06	908 41	*305 03	105 02	*091 59	84
85	.803 39	.116 91	.899 99	342 94	°19661	100 01	85
86	703 38	.049 99	.890 90	380 93	296 62	.100 10	86
87	594 28	2.044 21	.880 81	'419 03	'405 72	.119 19	87
		.888 18			524 91	.130 11	88
88	475 09		869 89	457 19		130 11	89
89	*344 98	'790 29	.858 05	'495 42	.655 02		
90	203 03	'681 24	.844 63	533 72	796 97	155 37	90
91	.047 66	*556 30	·830 86	.572 08	952 34	169 14	91
92	2.878 52	419 96	814 33	610 49	3.121 48	185 67	92
93	692 85	262 45	'798 51	648 95	307 15	*201 49	93
94	491 36	'093 42	778 15	.687 46	.508 64	221 85	94
				1	1	240 13	95
95	269 51	1.897 63	'759 87	726 00	730 49	1	96
96	.029 38	690 20	734 05	764 59	970 62	265 95	97
97	1.763 43	°447 16	713 69	'803 21	2.236 57	*286 31	
98	477 12	176 09	698 97	*841 87	.522 88	.301 03	98
99	176 09	0,003 00	,669.01	·88o 55	.823 91	*330 99	99
100	0.845 10	.602 06	.632 02	919 26	1.124 90	*367 98	100
101	477 12	301 03	522 88	958 00	522 88	477 12	101
102	.000 00	,000 00	322 00	996 76	0,000 00		102
	000 00	000 00		1 330 10	1	1	<u> </u>



$\mathbf{O}^{\mathbf{M}}$

2 PER CENT.

CONSTANTS

Constant.	Number.	Logarithm.
i	*02	2.301 030 0
$(1+i)$ $(1+i)^{\frac{1}{2}}$	1.000 920 2	0.008 600 2
$(\mathbf{I}+i)^{\frac{1}{4}}$	1°004 962 9 °980 392 2	0.002 120 0 1.001 300 8
$v^{rac{1}{2}}$	990 147 5	7·995 699 9 7·997 850 0
đ	.995 061 6 .019 607 8	2.292 429 8
δ	*019 802 6	2.296 722 8

0M

COMMUTATION TABLE

2 PER CENT.

_							
x	D_x	\mathbb{N}_x	S_x	\mathbf{C}_x	M_x	R_x	x
10 11 12 13 14	82 035 80 154 78 315 76 514 74 751 73 026	2 587 612 2 505 577 2 425 423 2 347 108 2 270 594 2 195 843	60 837 361 58 249 749 55 744 172 53 318 749 50 971 641 48 701 047	271.84 268.09 265.15 262.22 259.31 257.87	31 297'32 31 025'48 30 757'39 30 492'24 30 230'02 29 970'71	1 394 724'48 1 363 427'16 1 332 401'68 1 301 644'29 1 271 152'05 1 240 922'03	10 11 12 13 14
16	71 337	2 122 817	46 505 204	256·38	29 712·84	I 210 951'32 I 181 238'48 I 151 782'02 I 122 581'82	16
17	69 682	2 051 480	44 382 387	256·26	29 456·46		17
18	68 059	1 981 798	42 330 907	255·35	29 200·20		18
19	66 469	1 913 739	40 349 109	255·73	28 944·85		19
20	64 910	1 847 270	38 435 370	257°31	28 689'12	1 093 636'97	20
21	63 380	1 782 360	36 588 100	258°74	28 431'81	1 064 947'85	21
22	61 879	1 718 980	34 805 740	261°27	28 173'07	1 036 516'04	22
23	60 404	1 657 101	33 086 760	264°23	27 911'80	1 008 342'97	23
24	58 955	1 596 697	31 429 659	267°58	27 647'57	980 431'17	24
25	57 532	1 537 742	29 832 962	271'30	27 379'99	952 783.60	25
26	56 132	1 480 210	28 295 220	275'36	27 108'69	925 403.61	26
27	54 756	1 424 078	26 815 010	280'87	26 833'33	898 294.92	27
28	53 402	1 369 322	25 390 932	284'93	26 552'46	871 461.59	28
29	52 070	1 315 920	24 021 610	290'39	26 267'53	844 909.13	29
30 31 32 33 34	50 758 49 467 48 196 46 945 45 713	1 263 850 1 213 092 1 163 625 1 115 429 1 068 484	22 705 690 21 441 840 20 228 748 19 065 123 17 949 694	296.06 300.87 306.41 311.63	25 977'14 25 681'08 25 380'21 25 073'80 24 762'17	818 641.60 792 664.46 766 983.38 741 603.17 716 529.37	30 31 32 33 34
35	44 500	1 022 771	16 881 210	322.08	24 445.65	691 767°20	35
36	43 305	978 271	15 858 439	327.30	24 123.57	667 321°55	36
37	42 129	934 966	14 880 168	332.19	23 796.27	643 197°98	37
38	40 971	892 837	13 945 202	336.76	23 464.08	619 401°71	38
39	39 831	851 866	13 052 365	342.39	23 127.32	595 937°63	39
40 41 42 43 44	38 707 37 601 36 511 35 437 34 378	812 035 773 328 735 727 699 216 663 779	12 200 499 11 388 464 10 615 136 9 879 409 9 180 193	347 ²² 352 ⁶ 0 358 ⁴ 9 364 ⁰ 1	22 784'93 22 437'71 22 085'11 21 726'62 21 362'61	572 810'31 550 025'38 527 587'67 505 502'56 483 775'94	40 41 42 43 44
45	33 333	629 401	8 516 414	376.82	20 992'20	462 413'33	45
46	32 303	596 068	7 887 013	384.02	20 615'38	441 421'13	46
47	31 286	563 765	7 290 945	391.56	20 231'36	420 805'75	47
48	30 281	532 479	6 727 180	399.42	19 839'80	400 574'39	48
49	29 287	502 198	6 194 701	408.31	19 440'38	380 734'59	49
50	28 305	472 911	5 692 503	417.42	19 032'07	361 294'21	50
51	27 332	444 606	5 219 592	427.45	18 614'65	342 262'14	51
52	26 369	417 274	4 774 986	437.62	18 187'20	323 647'49	52
53	25 414	390 905	4 357 712	448.26	17 749'58	305 460'29	53
54	24 468	365 491	3 966 807	460.00	17 301'32	287 710'71	54

OM

COMMUTATION TABLE

2 PER

x	\mathbf{D}_{x}	N_x	\mathbb{S}_x	C_x	\mathbf{M}_x	R_x	x
					16 841*32	270 409'39	55
		317 495'		483.86		253 568 07	56
_		294 900°			15 885.69	237 198'52	57
58		273 232	2 647 898			221 312.83	58
59		252 485.	2 374 666.	522.40	14 879.59	205 923.71	59
60		232 655.	2 122 181.	535.46		191 044'12	60
61	18 012	213 736.	1 889 526	548.40	13 821.43	176 687.23	61
62	17 111'	195 724	1 675 790.	560°91	13 273.03	162 865.80	62
63	16 214°	178 613.	1 480 066.	572.72	12712'12	149 592 77	63
64	15 324°	162 399.	1 301 453.	583.85	12 139.40	136 880.65	64
65	14 439	147 075	1 139 054	594.05	11 555.25	124 741 25	65
66		132 636.	991 979'	602.27	10 961.20	113 185'70	66
67	12 694	119 074'	859 343	609.74	10 358 93	102 224'20	67
68		106 380.	740 269°	614.87	9 749 19	91 865.27	68
69	10 988.	94 545	633 889	617.82	9 134°32	82 116.08	69
70	10 155.	83 557	539 344°	617.96	8 516.20	72 981 76	70
71	9 337.8	73 402'2	455 786.8	615,46	7 898.54	64 465 26	71
72	8 539.2	64 064 4	382 384.6	609'51	7 283 08	56 566 72	72
73	7 762.3	55 525.2	318 320.5	600.24	6 673'57	49 283 64	73
74	7 009'5	47 762.9	262 795.0	587.43	6 073.00	42 610 07	74
75	6 284.7	40 753 4	215 032'1	570.81	5 485.57	36 537.07	75
76	5 590.6	34 468 7	174 278.7	550°47	4 914.76	31 021.20	76
77	4 930°5	28 878'1	139 810.0	526.02	4 364'29	26 136.74	77
78	4 307.8	23 947.6	110 931'9	498°13	3 838 27	21 772°45	78
79	3 725'2	19 639 8	86 984.3	466.83	3 340,14	17 934.18	79
	3 185.4					14 594 04	80
80 81	2 690.6	15 914.6 12 729.2	67 344.5	432°34	2 873°31 2 440°97	11 720 73	81
82	2 242'I	10 038.6	51 429 9 38 700 7	395°67 356°99	2 045'30	9 279.76	82
83	1 841.5	7 796.5	38 665.1	317.21	1 688.31	7 234.46	83
84	1 487.9	5 955.3	20 865.6	277.36	1 371,10	5 546.12	84
85	1 181,3	4 467°4	14 910'3	238.53	1 093'74	4 175.05	85
86	919.95	3 286.08	10 442.87	200.34	855.21	3 081,31	88
87	701.26	2 366.13	7 156.79	165.08	655.17	2 225.80	87
88	522.73	1 664.57	4 790.66	132.67	490.09	1 570.63	88
89	379.81	1 141.84	3 126.09	103.85	357.42	1 080.24	89
90	268.55	762.03	1 984.25	79.182	253.604	723.116	90
91	184.10	493.48	1 222,52	58.222	174'422	469.212	91
92	122'27	309.38	728'74	41.700	116,500	295.090	92
93	78.168	187'111	419.355	28.447	74.200	178'890	93
94	48.189	108.943	232.244	18.898	46.023	104°390	94
95	28.346	60.754	123,301	11.803	27.155	58.337	95
96	15.987	32°408	62.247	7.177 6			
97	8.495 9	16.421 0			8.174 0		97
98	4.308 3	7'925 1	13.718 2				
99	2,111 0	3.6168		}		1	
100	966 2	1'504 9	2.176 3	*541 3		1°462 2	
101	'406 o	538 7			395 4	525 5	101
102	132 7	132 7	132 7	130 1	,130 1	.130 1	102

OM LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x 2 per cent.

x	$\log \mathrm{D}_x$	$\log \mathbb{N}_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
10 11 12 13 14 15 16	4'914 00 '9°3 93 '893 84 '883 74 '873 62 '863 48 '853 31	6'412 90 '398 91 '384 79 '370 53 '356 14 '341 60 '326 91	2'434 31 '428 28 '423 49 '418 67 '413 82 '411 40 '408 89	4'495 51 '491 72 '487 95 '484 19 '480 44 '476 70 '472 94	5.086 00 .096 07 .106 16 .116 26 .126 38 .136 52 .146 69	7.587 10 .601 09 .615 21 .629 47 .643 86 .658 40 .673 09	'571 72 '576 51 '581 33 '586 18 '588 60 '591 11	5.504 49 .508 28 .512 05 .515 81 .519 56 .523 30 .527 06	10 11 12 13 14 15 16
17	.843 12	°312 07	'408 68	469 18	156 88	.687 93	'591 32	530 82	17
18	.832 89	°297 06	'407 14	465 39	167 11	.702 94	'592 86	534 61	18
19	.822 62	°281 88	'407 78	461 57	177 38	.718 12	'592 22	538 43	19
20	'812 31	'266 53	*410 46.	'457 72	187 69	'733 47	589 54	'542 28	20
21	'801 95	'251 00	*412 86	'453 81	198 05	'749 00	587 14	'546 19	21
22	'791 54	'235 27	*417 09	'449 83	208 46	'764 73	582 91	'550 17	22
23	'781 07	'219 35	*421 98	'445 79	218 93	'780 65	578 02	'554 21	23
24	'770 52	'203 22	*427 46	'441 66	229 48	'796 78	572 54	'558 34	24
25	759 91	'186 88	'433 45	'437 43	'240 09	·813 12	.566 55	*562 57	25
26	749 21	'170 32	'439 89	'433 11	'250 79	·829 68	.560 11	*566 89	26
27	738 44	'153 53	'448 50	'428 67	'261 56	·846 47	.551 50	*571 33	27
28	727 56	'136 51	'454 75	'424 10	'272 44	·863 49	.545 25	*575 90	28
29	716 59	'119 23	'462 98	'419 42	'283 41	·880 77	.537 02	*580 58	29
30	'705 51	'101 70	'471 38	'414 59	'294 49	.898 30	528 62	'585 41	30
31	'694 32	'083 89	'478 38	'409 61	'305 68	.916 11	521 62	'590 39	31
32	'683 01	'065 81	'486 31	'404 50	'316 99	.934 19	513 69	'595 50	32
33	'671 59	'047 44	'493 64	'399 22	'328 41	.952 56	506 36	'600 78	33
34	'660 04	'028 76	'500 40	'393 79	'339 96	.971 24	499 60	'606 21	34
35	648 36	'009 78	507 96	'388 20	351 64	-'990 22	'492 04	611 80	35
36	636 54	5'990 46	514 94	'382 44	363 46	6'009 54	'485 06	617 56	36
37	624 58	'970 80	521 38	'376 51	375 42	'029 20	'478 62	623 49	37
38	612 47	'950 77	527 32	'370 40	387 53	'049 23	'472 68	629 60	38
39	600 22	'930 37	534 51	'364 13	399 78	'069 63	'465 49	635 87	39
40	587 79	'909 57	'540 60	357 65	'412 21	°090 43	'459 40	642 35	40
41	575 20	'888 36	'547 28	350 98	'424 80	°111 64	'452 72	649 02	41
42	562 43	'866 72	'554 47	344 10	'437 57	°133 28	'445 53	655 90	42
43	549 45	'844 61	'561 11	336 99	'450 55	°155 39	'438 89	663 01	43
44	536 28	'822 02	'568 68	329 65	'463 72	°177 98	'431 32	670 35	44
45	'522 88	798 93	*576 13	'322 06	'477 12	'201 07	'423 87	'677 94	45
46	'509 24	775 30	*584 35	'314 19	'490 76	'224 70	'415 65	'685 81	46
47	'495 34	751 10	*592 80	'306 03	'504 66	'248 90	'407 20	'693 97	47
48	'481 16	726 30	*601 43	'297 54	'518 84	'273 70	'398 57	'702 46	48
49	'466 68	700 88	*610 99	'288 70	'533 32	'299 12	'389 01	'711 30	49
50	'451 86	674 78	·620 58	'279 49	548 14	'325 22	'379 42	720 51	50
51	'436 68	647 98	·630 89	'269 85	563 32	'352 02	'369 11	730 15	51
52	'421 09	620 42	·641 10	'259 77	578 91	'379 58	'358 90	740 23	52
53	'405 08	592 07	·651 53	'249 19	594 92	'407 93	'348 47	750 81	53
54	'388 59	562 88	·662 76	'238 08	611 41	'437 12	'337 24	761 92	54
			TAT.						

OM

LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x 2 PER CENT.

x	$\log \mathcal{D}_x$	$\log N_x$	$\log \mathrm{C}_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
55	4.371 29	5.232 78	2.673 73	4.526 38	5.628 41	6.467 22	3.326 27	5'773 62	55
56	354 01	501 74	684 72	214 04	.645 99	°498 26	315 28	'785 96 '798 99	56 57
57	335 82 316 95	°469 67	·695 98	187 21	683 05	*563 47	292 83	812 79	58
59	297 33	430 33	718 25	172 59	'702 67	597 76	281 75	827 41	59
60	276 89	.366 71	.728 73	157 06	723 11	633 29	271 27	842 94	60
61	255 57	329 88	739 10	140 55	°744 43	670 12	260 90	859 45	61
62	233 27	291 65	'748 89	122 97	•766 73	'708 35	'251 11	.877 03	62
63	209 90	'251 91	757 94	°104 22	'790 10	'748 09	*242 06	.895 78	63
64	.182 36	210 59	.766 30	°084 20	·814 64	'789 41	'233 70	.912 80	64
65	159 55	167 54	'773 82	*062 79	'840 45	.832 46	.559 18	'937 21	65
66	132 33	122 66	'780 01	.039 87	*867 67	877 34	'219 99	960 13	66 67
67	103 59	075 82	785 15	3.988 97	·896 41 ·926 83	924 18	'214 85	984 69 4.011 03	68
68	073 17	4.975 64	790 86	3 960 68	°959 08	5.024 36	209 14	039 32	69
	006 67	921 98	790 96	930 26	939 33	078 02	200 04	.069 74	70
70 71	3.970 24	865 71	790 90	·897 55	4.029 76	134 29	209 04	102 45	71
72	931 42	.806 62	.784 98	.862 32	•068 58	193 38	'215 02	137 68	72
73	.889 99	'744 49	.778 56	824 36	.110 01	255 51	'221 44	175 64	73
74	.845 69	.679 09	'768 96	.783 40	15431	*32091	'231 04	.519 90	74
75	.798 28	.610 16	.756 49	.739 22	201 72	*389 84	'243 51	.260 78	75
76	.747 46	537 43	*740 74	.691 20	252 54	462 57	*259 26	'308 50	76
77	692 89	'460 57	721 00	.639 91	307 11	539 43	'279 00	360 09	77 78
78	634 26	379 26	697 35	584 14	°365 74 °428 85	·620 74 ·706 86	'302 65 '330 84	'415 86 '476 24	79
79	571 15	293 14	.669 16	523 76	_	1			80
80	503 16	201 80	635 82	'458 38 '387 56	°496 84 °570 16	°798 20 °895 20	364 18 402 67	.241 62 .612 44	81
81	'429 84 '350 66	10480	597 33 552 65	307 50	649 34	998 33	447 35	689 24	82
83	265 10	3.891 90	501 34	227 45	734 90	4.108 10	'498 66	772 55	83
84	172 57	774 90	443 05	137 07	827 43	'225 10	.556 95	*862 93	84
85	'072 37	.650 05	376 99	.038 91	927 63	'349 95	623 01	961 09	85
86	2.963 76	'516 68	301 78	2.032 23	3.036 24	483 32	.698 22	3.067 77	86
87	'846 07	374 04	21770	.816 32	153 93	625 96	:782 30	.183 62	87
88	.718 27	*221 30	122 76	'690 28	281 73	'778 70	.877 24	*309 72	88
89	579 57	.057 61	016 27	.253 18	420 43	942 39	983 73	*446 82	
90	'429 02	2.881 97	1.898 63	404 16	570 98	3.118 03	2.101 34	595 84	90
91	265 05	693 27	765 09	°241 60	'734 95 '912 69	306 73	234 91 379 86	758 40	92
92	1.893 03	'490 49 '272 10	'620 14 '454 03	1.872 16	2.106 02	727 90	545 97	2.127 84	93
94	682 95	037 20	276 41	663 26	317 05	'962 80	:723 59	.336 74	94
95	1452 50	1.783 57	072 01	°433 85	547 50	2.216 43	927 99	·566 15	95
96	203.77	510 65	0.855 98	186 15	796 23	489 35	Ī·144 02	.813 85	98
97	0.929 21	215 40		0'912 43	1.070 79	.784 60	395 66	1.087 57	97
98	'634 30	0.899 00	324 67	.618 35	365 70	1,101 00	:675 33	381 65	98
99	324 67	.228 35	'043 07	309 84	675 33	*441 68	'956 93	.690 16	99
100	1.082 08	177 51	ΰ733 44	1.971 60	0.014 95	822 49	0.266 56	0.028 40	
101	608 50	1.731 35	423 81	597 04	391 50	0.268 65	:576 19	'402 96 '885 82	101
102	122 78	122 78	114 18	114 18	.877 22	877 22	*885 82	005 02	102

 $\mathbb{N}_x = \mathbb{D}_x + \mathbb{D}_{x+1} + \dots$ $S_x = N_x + N_{x+1} + \dots$

OM VALUES OF α_x , A_x , P_x . LOGARITHMS OF a_x , A_x , P_x 2 per cent.

x	a_x	A_x	P_x	$\log a_x$	$\log A_x$	$\log P_x$	x
10	30°543	38 151	°01 210	1'498 90	1.581 51	2.082 61	10
11	30°259	38 707	°01 238	'494 98	.587 79	.092 81	11
12	29°970	39 274	°01 268	'490 95	.594 11	.103 16	12
13	29°676	39 852	°01 299	'486 79	.600 45	.113 66	13
14	29°375	40 441	°01 331	'482 52	.606 82	.124 30	14
15	29'069	'41 041	°01 365	'478 12	613 22	'135 10	15
16	28'758	'41 651	°01 400	'473 60	619 63	'146 03	16
17	28'441	'42 273	°01 436	'468 95	626 06	'157 11	17
18	28'118	'42 904	°01 473	'464 17	632 50	'168 33	18
19	27'791	'43 546	°01 512	'459 26	638 95	'179 69	19
20	27.459	'44 199	°01 553	'454 22	'645 41	'191 19	20 .
21	27.122	'44 860	°01 595	'449 05	'651 86	'202 81	21
22	26.780	'45 529	°01 639	'443 73	'658 29	'214 56	22
23	26.433	'46 208	°01 684	'438 28	'664 72	'226 44	23
24	26.083	'46 896	°01 732	'432 70	'671 14	'238 44	24
25	25.728	'47 590	'01 781	'426 97	'677 52	250 55	25
26	25.370	'48 295	'01 831	'421 11	'683 90	262 79	26
27	25.007	'49 004	'01 884	'415 09	'690 23	275 14	27
28	24.642	'49 721	'01 939	'408 95	'696 54	287 59	28
29	24.272	'50 446	'01 996	'402 64	'702 83	300 19	29
30	23.899	*51 178 *51 915 *52 661 *53 411 *54 169	'02 055	'396 19	'709 08	'312 89	30
31	23.523		'02 117	'389 57	'715 29	'325 72	31
32	23.144		'02 181	'382 80	'721 49	'338 69	32
33	22.760		'02 248	'375 85	'727 63	'351 78	33
34	22.374		'02 318	'368 72	'733 75	'365 03	34
35	21.984	54 934	°02 390	361 42	739 84	'378 42	35
36	21.590	55 706	°02 466	353 92	745 90	'391 98	36
37	21.193	56 485	°02 545	346 22	751 93	'405 71	37
38	20.792	57 270	°02 628	338 30	757 93	'419 63	38
39	20.387	58 064	°02 715	330 15	763 91	'433 76	39
40	19'567	.58 865	°02 806	'321 78 '313 16 '304 29 '295 16 '285 74	.769 86	'448 08	40
41	19'567	.59 673	°02 901		.775 78	'462 62	41
42	19'150	.60 488	°03 002		.781 67	'477 38	42
43	18'731	.61 311	°03 107		.787 54	'492 38	43
44	18'308	.62 140	°03 218		.793 37	'507 63	44
45	17.882	.62 977	°03 335	'276 05	'799 18	523 13	45
46	17.453	.63 819	°03 459	'266 06	'804 95	538 89	46
47	17.020	.64 668	°03 589	'255 76	'810 69	554 93	47
48	16.585	.65 521	°03 726	'245 14	'816 38	571 24	48
49	16.147	.66 377	°03 871	'234 20	'822 02	587 82	49
50	15.708	67 240	°04 024	°222 92	·827 63	.604 71	50
51	15.267	68 104	°04 187	°211 30	·833 17	.621 87	51
52	14.825	68 973	°04 359	°199 33	·838 68	.639 35	52
53	14.381	69 841	°04 541	°186 99	·844 11	.657 12	53
54	13.938	70 711	°04 734	°174 29	·849 49	.675 20	54

VALUES OF a_x , A_x , P_x . LOGARITHMS OF a_x , A_x , P_x 2 per cent.

x	α_x	A_x	P_x	$\log a_x$	$\log \mathrm{A}_x$	$\log \mathrm{P}_x$	x
55	13*494	·71 580	°04 939	1,191 10	ī·854 79	<u>2</u> .693 60	55
56	13.021	72 449	°05 156	147 73	·860 o3	'712 30	56
57	12.010	73 315	.02 384	.133 82	.865 19	'731 34	57
58	12.170	74 175	.05 632	119 58	*870 26	.750 68	58
59	11.732	°75 °34	.02 893	104 91	.875 26	·77° 35	59
60	11,508	75 887	.06 171	.089 82	*880 17	790 35	60
61 62	10.866	76 733	*06 467	'074 31	·884 98	81067	61
63	10.439 10.016	77 571	'06 781 '07 117	°058 38 °042 01	·889 70 ·894 32	'831 32 '852 31	62 63
64	9.298	79 221	07 475	042 01	*898 84	873 61	64
65	0.186	80 028	07 857	°007 99	'903 24	895 25	65
66	8.780	*80 824	08 264	0,000 33	903 24	917 21	66
67	8.381	.81 606	.08 699	972 23	'911 72	939 49	67
68	7.989	.82 376	.09 164	953 69	915 80	.962 11	68
69.	7.604	*83 130	.09 661	934 72	·919 76	.985 04	69
70	7.228	:83 867	10 192	'915 31	923 59	ī.008 28	70
71	6.861	*84 588	.10 491	.895 47	927 31	°031 84	71
72	6.205	·85 290	11 368	*875 20	*930 90	.022 40	72
73	6.123	·85 975	12 019	·854 50	934 37	.079 87	73
74	5.814	·86 638	12 715	.833 40	'937 71	104 31	74
75	5.485	*87 285	13 460	.81188	'940 94	129 06	75
76 77	5°165 4°857	*87 910 *88 516	14 258	789 97	'944 04	154 07	76
78	4 557	.89 100	°15 113	'767 68 '745 00	°947 °2 °949 88	°179 34 °204 88	77 78
79	4'272	·89 662	17 007	721 99	952 61	230 62	79
80	3,996	'90 203	18 054	.698 64	955 22	256 58	80
81	3'731	90 724	19 176	674 96	957 72	282 76	81
82	3°477	91 222	20 375	651 01	.060 10	309 09	82
83	3°234	.01 999	21 655	·626 8o	.962 35	*335 55	83
84	3,003	.02 121	*23 023	.602 33	°964 50	362 17	84
85	2.485	.92 585	*24 483	577 68	*966 54	·388 86	85
86	2.272	92 997	.26 035	552 92	·968 47	415 55	86
87 88	2°373 2°184	93 386	27 689	527 97	'970 28	'442 31	87
89	2'006	°93 758	°29 443	°503 03 °478 04	'972 01 '973 61	468 98 495 57	88 89
90	1.838		31 302		į.		
91	1.681	'94 437 '94 744	33 201	°452 95 °428 22	'975 14 '976 55	'522 19 '548 33	90 91
92	1.230	95 039	35 343	420 22	970 55	540 33	92
93	1,394	95 308	39 816	379 07	'979 13	.600 06	93
94	1,501	95 567	42 273	354 25	.080 31	·626 o6	94
95	1,143	°95 797	°44 697	331 07	·981 35	.650 28	95
96	1.022	.96 024	'47 370	.306 88	.982 38	675 50	96
97	933	96 210	'49 777	°286 19	983 22	697 03	97
98	·839	°96 394	·52 402	'264 70	984 05	719 35	98
	713	'96 643	.26 431	233 65	*985 17	751 52	99
100	·558	96 944	62 243	192 43	* '986 52	'794 09	100
102	°327	°97 396 °98 039	.73 399 .98 039	122 85	'988 54 '991 40	.865 69 .991 40	101 102
		739	90 039	00000	991 40	991 40	102



$\mathbf{O}^{\mathbf{M}}$

$2^{\frac{1}{4}}$ PER CENT.

CONSTANTS.

Constant.	Number.	Logarithm.
i $(1+i)$ $(1+i)^{\frac{1}{2}}$ $(1+i)^{\frac{1}{4}}$ v $v^{\frac{1}{4}}$ $v^{\frac{1}{4}}$ d	°022 5 1°022 5 1°011 187 4 1°005 578 2 °977 995 1 °988 936 4 °994 452 8 °022 004 9	2·352 182 5 0·009 663 3 0·004 831 7 0·002 415 8 1·990 336 7 1·995 168 3 1·997 584 2 2·342 519 2
δ	022 250 6	2.347 341 9

OM

COMMUTATION TABLE

 $2^{\frac{1}{4}}$ PER CENT.

æ	D_x	\mathbb{N}_x	S_x	C_x	\mathbf{M}_x	R_x	x
10	80 051	2 391 762	54 517 181	264.62	27 420°44	1 192 115'99	10
11	78 025	2 311 711	52 125 419	260.33	27 155°82	1 164 695'55	11
12	76 048	2 233 686	49 813 708	256.84	26 895°49	1 137 539'73	12
13	74 117	2 157 638	47 580 022	253.39	26 638°65	1 110 644'24	13
14	72 233	2 083 521	45 422 384	249.96	26 385°26	1 084 005'59	14
15	7° 394	2 011 288	43 338 863	247.96	26 135 30	1 057 620°33	15
16	68 597	1 940 894	41 327 575	245.93	25 887 34	1 031 485°03	16
17	66 841	1 872 297	39 386 681	245.21	25 641 41	1 005 597°69	17
18	65 125	1 805 456	37 514 384	243.75	25 396 20	979 956°28	18
19	63 448	1 740 331	35 708 928	243.51	25 152 45	954 560°08	19
20	61 809	1 676 883	33 968 597	244'42	24 908 94	929 407.63	20
21	60 204	1 615 074	32 291 714	245'17	24 664 52	904 498.69	21
22	58 634	1 554 870	30 676 640	246'97	24 419 35	879 834.17	22
23	57 097	1 496 236	29 121 770	249'16	24 172 38	855 414.82	23
24	55 592	1 439 139	27 625 534	251'70	23 923 22	831 242.44	24
25	54 116	1 383 547	26 186 395	254.57	23 671°52	807 319'22	25
26	52 671	1 329 431	24 802 848	257.74	23 416°95	783 647'70	26
27	51 254	1 276 760	23 473 417	262.26	23 159°21	760 230'75	27
28	49 864	1 225 506	22 196 657	265.41	22 896°95	737 071'54	28
29	48 502	1 175 642	20 971 151	269.83	22 631°54	714 174'59	29
30	47 164	1 127 140	19 795 509	274'43	22 361.71	691 543'05	30
31	45 852	1 079 976	18 668 369	278'20	22 087.28	669 181'34	31
32	44 565	1 034 124	17 588 393	282'64	21 809.08	647 094'06	32
33	43 302	989 559	16 554 269	286'74	21 526.44	625 284'98	33
34	42 062	946 257	15 564 710	290'53	21 239.70	603 758'54	34
35 36 37 38 39	40 846 39 652 38 481 37 331 36 204	904 195 863 349 823 697 785 216 747 885	14 618 453 13 714 258 12 850 909 12 027 212 11 241 996	294'91 298'95 302'68 306'10	20 949'17 20 654'26 20 355'31 20 052'63 19 746'53	582 518·84 561 569·67 540 915·41 520 560·10 500 507·47	35 36 37 38 39
40 41 42 43 44	35 °97 34 °10 32 944 31 896 3° 867	711 681 676 584 642 574 609 630 577 734	9 782 430 9 105 846 8 463 272 7 853 642	314.06 318.15 322.67 326.84 331.77	19 436°08 19 122°02 18 803°87 18 481°20 18 154°36	480 760 94 461 324 86 442 202 84 423 398 97 404 917 77	40 41 42 43 44
45	29 856	546 867	7 275 908	336.69	17 822°59	386 763°41	45
46	28 863	517 011	6 729 041	342.28	17 485°90	368 940°82	46
47	27 885	488 148	6 212 030	348.15	17 143°62	351 454°92	47
48	26 924	460 263	5 723 882	354.27	16 795°47	334 311°30	48
49	25 977	433 339	5 263 619	361.27	16 441°20	317 515°83	49
50	25 044	407 362	4 830 280	368·43	16 079 93	301 074 63	50
51	24 124	382 318	4 422 918	376·36	15 711 50	284 994 70	51
52	23 217	358 194	4 040 600	384·37	15 335 14	269 283 20	52
53	22 322	334 977	3 682 406	392·76	14 950 77	253 948 06	53
54	21 438	312 655	3 347 429	402·06	14 558 01	238 997 29	54

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COMMUTATION TABLE

21 PER 4 CENT.

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x	D_x	\mathbb{N}_x	\mathbb{S}_x	\mathbf{C}_x	M_x	\mathbf{R}_x	x
55 56 57 58	18 564.	291 217. 270 653. 232 107.	3 °34 774' 2 743 557' 2 472 9°4' 2 221 951'	411.33 420.85 430.84 441.00		224 439°28 210 283°33 196 538°71 183 214°94	55 56 57 58
59	16 3 34.	196 944.	1 989 844.	451.30	12 451.93	170 322.01	59 60
60 61 62 63 64	13 534 14 701.	136 498. 180 610.	1 578 793° 1 398 183° 1 398 687°	471'17 480'74 489'66 497'96	11 539°44 11 068°27 10 587°53 10 097°87	145 869'45 134 330'01 123 261'74 112 674'21	61 62 63 64
65 66 67 68 69	12 315° 11 539° 10 774° 10 020°	123 397' 111 082' 99 543' 88 769' 78 749'4	946 194° 822 797° 711 715° 612 172° 523 403°0	505'42 511'42 516'24 519'31 520'52	9 599°91 9 094°49 8 583°07 8 066°83 7 547°52	102 576°34 92 976°43 83 881°94 75 298°87 67 232°04	65 66 67 68 69
70 71 72 73 74	8 555.7 7 848.0 7 159.3 6 492.0 5 848.1	69 469°0 60 913°3 53 065°3 45 906°0	444 653 6 375 184 6 314 271 3 261 206 0 215 300 0	519°37 516°00 509°77 501°06 488°90	7 027'00 6 507'63 5 991'63 5 481'86 4 980'80	59 684*52 52 657*52 46 149*89 40 158*26 34 676*40	70 71 72 73 74
75 76 77 78 79	5 230.5 4 641.5 4 083.5 3 559.0 3 070.2	33 565'9 28 335'4 23 693'9 19 610'4 16 051'4	175 886°0 142 320°1 113 984°7 90 290°8 70 680°4	473'90 455'90 434'59 410'54 383'80	4 491'90 4 018'00 3 562'10 3 127'51 2 716'97	29 695.60 25 203.70 21 185.70 17 623.60 14 496.09	75 76 77 78 79
80 81 82 83 84	2 618.8 2 206.6 1 834.4 1 502.6 1 211.3	12 981'2 10 362'4 8 155'8 6 321'4 4 818'8	54 629°0 41 647°8 31 285°4 23 129°6 16 808°2	354°58 323°71 291°35 258°25 225°26	2 333°17 1 978°59 1 654°88 1 363°53 1 105°28	11 779°12 9 445°95 7 467°36 5 812°48 4 448°95	80 81 82 83 84
85 86 87 88 89	959'42 745'30 566'99 421'42 305'45	3 607.52 2 648.10 1 902.80 1 335.81 914.39	11 989°38 8 381°86 5 733°76 3 830°96 2 495°15	193.00 161.91 133.09 106.69 83.289	880°02 687°02 525°11 392°02 285°333	3 343.67 2 463.65 1 776.63 1 251.52 859.501	85 86 87 88 89
90 91 92 93 94	215.44 147.33 97.611 62.253 38.283	608'94 393'50 246'175 148'564 86'311	1 580·76 971·82 578·323 332·148 183·584	63°369 46°481 33°210 22°600 14°976	202'044 138'675 92'194 58'984 36'384	574°168 372°124 233°449 141°255 82°271	90 91 92 93 94
95 96 97 98 99	22.465 12.639 6.700 2 3.389 3 1.657 4	48.028 25.563 12.923 7 6.223 5 2.834 2	97°273 49°245 23°682 0 10°758 3 4°534 8	1.657 4	21'407 7 12'076 3 6'415 8 3'252 4 1'595 0	45.886 6 24.478 9 12.402 6 5.986 8 2.734 4	96 97 98 99
100 101 102	756 4 317 0 103 4	1°176 8 °420 4 °103 4		206 7	.730 5 .307 8 .101 1	1°139 4 °408 9 °101 1	101

OM LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x $2\frac{1}{4}$ per cent.

_									
x	$\log \mathrm{D}_x$	$\log N_x$	$\log \mathrm{C}_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$ $ col \mathbb{N}_x	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathrm{M}_x$	x
10 11 12 13 14	4'9°3 37 '892 23 '881 09 '869 92 '858 74	6·378 72 ·363 93 ·349 02 ·333 98 ·318 80	2:422 62 :415 52 :409 67 :403 79 :397 88	4.438 07 .433 86 .429 68 .425 51 .421 36	5.096 63 107 77 118 91 130 08	7.621 28 .636 07 .650 98 .666 02	3.577 38 .584 48 .590 33 .596 21 .602 12	5.561 93 .566 14 .570 32 .574 49 .578 64	10 11 12 13 14
15 16 17 18 19	'847 53 '836 30 '825 04 '813 75 '802 42	'3°3 47 '288 °° '272 37 '256 59 '24° 63	'394 39 '390 82 '389 54 '386 94 '386 52	'417 23 '413 09 '408 94 '404 77 '400 58	152 47 163 70 174 96 186 25 197 58	'696 53 '712 00 '727 63 '743 41 '759 37	605 61 609 18 610 46 613 06 613 48	582 77 586 91 591 06 595 23 599 42	15 16 17 18 19
20 21 22 23 24	791 05 779 63 768 15 756 61 745 01	'224 50 '208 19 '191 69 '175 00 '158 10	388 14 389 47 392 64 396 47 400 88	396 36 392 07 387 73 383 32 378 82	'208 95 '220 37 '231 85 '243 39 '254 99	'775 50 '791 81 '808 31 '825 00 '841 90	'611 86 '610 53 '607 36 '603 53 '599 12	603 64 607 93 612 27 616 68 621 18	20 21 22 23 24
25 26 27 28 29 30	733 33 721 57 709 73 697 79 685 76	'140 99 '123 67 '106 11 '088 32 '070 28 '051 98	'405 81 '411 19 '418 74 '423 91 '431 09 '438 42	374 23 369 53 364 72 359 78 354 71 349 50	'266 67 '278 43 '290 27 '302 21 '314 24 '326 39	'859 01 '876 33 '893 89 '911 68 '929 72 '948 02	.594 19 .588 81 .581 26 .576 09 .568 91	625 77 630 47 635 28 640 22 645 29	25 26 27 28 29 30
31 32 33 34 35	661 36 648 99 636 50 623 89	031 98 033 41 014 57 5 995 44 976 01	'444 36 '451 23 '457 49 '463 19	349 50 '344 14 '338 64 '332 97 '327 15 '321 17	320 39 338 64 351 01 363 50 376 11 388 85	966 59 -985 43 6.004 56 -023 99	555 64 5548 77 542 51 536 81	655 86 661 36 667 03 672 85	31 32 33 34 35
36 37 38 39 40	598 27 585 24 572 07 558 75	'936 19 '915 77 '894 99 '873 83	'475 60 '480 98 '485 86 '491 99	'315 01 '308 68 '302 17 '295 49	'401 73 '414 76 '427 93 '441 25 '454 73	063 81 084 23 105 01 126 17	'524 40 '519 02 '514 14 '508 01	684 99 691 32 697 83 704 51	36 37 38 39 40
41 42 43 44 45	531 61 517 77 503 74 489 50	·830 32 ·807 92 ·785 07 ·761 73 ·737 88	502 63 508 76 514 33 520 84	281 53 274 25 266 73 258 98	4,34 73 468 39 482 23 496 26 510 50 524 96	'169 68 '192 08 '214 93 '238 27 '262 12	362 99 '497 37 '491 24 '485 67 '479 16	718 47 718 47 725 75 733 27 741 02	41 42 43 44 45
46 47 48 49 50	475 04 '460 34 '445 38 '430 13 '414 59 '398 70	737 65 713 50 688 55 663 01 636 83	527 23 534 38 541 77 549 34 557 83	*242 69	534 96 539 66 554 62 569 87 585 41	286 50 311 45 336 99 363 17	472 77 '465 62 '458 23 '450 66 '442 17	757 31	46 47 48 49
51 52 53 54	396 76 382 46 365 81 348 73 331 19	582 42 554 12 525 01 495 07	500 30 575 60 584 75 594 12 604 29	196 22 185 69 174 66 163 10	617 54 634 19 651 27 668 81	390 02 '417 58 '445 88 '474 99 '504 93	433 04 '424 40 '415 25 '405 88 '395 71	.803 78 .814 31 .825 34 .836 90	51 52 53 54

OM

logarithms and co-logarithms of D_x , N_x , C_x , M_x $2\frac{1}{4}$ rent.

_				1		-	1		
x	$\log \mathcal{D}_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
55 56	4,313 11	5.464 22	2.614 19	4.120 04	5.686 89 .705 52	6·535 78 •567 59	3.385 81	5·849 o6 ·861 87	55 56
57	275 22	399 59	634 32	124 63	.724 78	600 41	365 68	875 37	57
58	255 28	365 69	644 44	110 35	744 72	634 31	355 56	889 65	58
59	'234 60	330 63	654 47	095 24	765 40	'669 37	345 53	'904 76	59
	'213 10	294 34	663 88	'079 20	.786 90	1	336 12		
60	190 72		673 18	062 18	·809 28	705 66	330 12	920 80	60
61 62	167 35	256 74	.681 91	°044 08	832 65	743 26	320 02	937 82	61 62
63	107 35	177 23	'689 90	*024 79	·857 o8		310 10	955 92	63
64	117 32	135 13	697 19	024 19	882 68	·822 77 ·864 87	310 10	975 21	64
							_		
65	'090 44	.001 30	'703 66	3.982 27	909 56	'908 70	*296 34	4.017 73	65
66	°062 16	045 64	708 77	958 78	937 84	954 36	·291 23 ·287 15	'041 22	66 67
68	'032 36 '000 88	4'998 01	712 85	933 64	967 64	2.001 99	207 15	·066 36	68
69			715 43	906 70	999 12	'051 74	284 57	'093 30	69
	3.967 57	'896 25	'716 44	.877 80	4.032 43	103 75	283 56	122 20	
70	932 25	'841 79	715 48	·846 77	.067 75	158 21	284 52	153 23	70
71	*894 76	'784 71	71265	.813 42	105 24	'215 29	287 35	186 58	71
72	*854 87	'72481	707 37	777 54	145 13	275 19	292 63	'222 46	72
73	'812 38	661 87	699 89	738 93	187 62	338 13	300 11	'261 07	73
74	'767 02	.295 62	'689 22	.697 30	°232 98	404 35	'310 78	'302 7 0	74
75	'718 55	'525 90	675 69	652 43	·281 45	474 10	'324 31	347 57	75
76	'666 66	452 33	658 87	'604 01	'333 34	547 67	'341 13	395 99	76
77	.61103	'374 64	.638 08	'551 71	'388 97	625 36	'361 92	·448 29	77
78	°551 33	292 49	613 36	'495 20	'448 67	'707 51	'386 64	.204 80	78
79	'487 16	.502 21	.284 11	*434 08	'512 84	' 794 49	'415 89	.265 92	79
80	'41811	113 31	'549 71	'367 95	.281 89	886 69	'450 29	632 05	80
81	343 73	.012 46	.210 19.	*296 36	656 27	984 54	'489 84	'703 64	81
82	1263 48	3.911 47	464 41	218 77	'736 52	4.088 23	535 59	'781 23	82
83	176 86	.800 81	412 04	134 66	823 14	.199 19	587 96	865 34	83
84	083 26	'682 94	352 68	°043 47	'916 74	'317 06	'647 32	956 53	84
85	5,085 01	557 21	*285 56	2'944 49	3.012 99	442 79	714 44	3.022 21	85
86	·872 33	422 93	209 28	·836 97	127 67	577 07	790 72	.163 03	86
87	753 57	279 39	124 14	'720 25	*246 43	'720 61	.875 86	279 75	87
88	624 72	125 74	028 14	593 31	375 28	'874 26	971 86	'406 69	88 89
89	*484 95	2'961 13	1'920 59	°455 35	'515 05	3.038 87	2.079 41	544 65	
90	333 33	.784 57	.801 88	°3°5 45	'666 67	215 43	198 12	694 55	90
91	'168 30	594 94	667 28	142 00	831 70	405 06	332 72	-858 00	91
92 93	1.089 20	391 24	521 27	1.964 70	2,010 20	608 76	'478 73	2.035 30	92 93
94	'794 16	171 91	354 10	770 73	205 84	·828 og	645 90	229 27	94
	.283 01	1'936 07	175 41	.260 91	'416 99	2.063 93	824 59	439 09	
95	351 50	'681 49	0.969 92	330 57	648 50	318 51	1.030 02	669 43	95 96
96	10171	407 61	752 85	.081 93	·898 29	'592 39 '888 61	247 15	'918 07 1'192 7 5	97
98	0·826 09 •530 12	°111 39 °1794 °3	'500 15 '219 42	0.807 25	1°173 91 '469 88	1.205 97	'499 85 '780 58	487 80	98
99	219 42	452 43	i 936 76	202 76	*780 58	547 57	0.063 24	797 24	99
100	ī·878 77		626 07						100
101		°070 70		ī·863 62 ·488 27	0°121 23 °498 87	929 30	'373 93 '684 63		101
102	°501 13	1.623 66 .014 34	'315 37 '004 68	°004 68	'985 66	°985 66	995 32		102
	014 34	014 34	004 00	004 00	903 00	903 00	995 34	993 34	

OM VALUES OF a_x , A_x , P_x . LOGARITHMS OF a_x , A_x , P_x $2\frac{1}{4}$ cent.

x	a_x	Λ_x	P_x	$\log a_x$	$\log A_x$	$\log P_x$	x
10	28.878	34 253	°01 146 °01 175 °01 204 °01 235 °01 266	1'475 35	1'534 7°	2°059 35	10
11	28.628	34 804		'471 70	'541 63	°069 93	11
12	28.372	35 366		'467 93	'548 59	°080 66	12
13	28.111	35 941		'464 06	'555 59	°091 53	13
14	27.844	36 528		'460 06	'562 62	°102 56	14
15	27.572	'37 128	°01 299	'455 94	569 70	'113 76	15
16	27.294	'37 739	°01 334	'451 70	576 79	'125 09	16
17	27.012	'38 362	°01 370	'447 33	583 90	'136 57	17
18	26.723	'38 996	°01 407	'442 84	591 02	'148 18	18
19	26.429	'39 642	°01 445	'438 21	598 16	'159 95	19
20	26.130	'40 300	'01 485	'433 45	605 31	171 86	20
21	25.826	'40 968	'01 527	'428 56	612 44	183 88	21
22	25.518	'41 647	'01 571	'423 54.	619 58	196 04	22
23	25.205	'42 336	'01 616	'418 39	626 71	208 32	23
24	24.887	'43 034	'01 662	'413 09	633 81	220 72	24
25	24.566	'43 742	°01 711	'407 66	.640 90	'233 24	25
26	24.240	'44 459	°01 761	'402 10	.647 96	'245 86	26
27	23.911	'45 185	°01 814	'396 38	.654 99	'258 61	27
28	23.577	'45 919	°01 868	'390 53	.661 99	'271 46	28
29	23.239	'46 661	°01 925	'384 52	.668 95	'284 43	29
30	22.898	'47 412	°01 984	'378 37	'675 89	'297 52	30
31	22.553	'48 170	°02 045	'372 05	'682 78	'310 73	31
32	22.205	'48 938	°02 109	'365 58	'689 65	'324 07	32
33	21.853	'49 713	°02 175	'358 94	'696 47	'337 53	33
34	21.497	'50 496	°02 245	'352 12	'703 26	'351 14	34
35	21°137	51 289	°02 317	'345 11	710 02	364 91	35
36	20°773	52 088	°02 392	'337 92	716 74	378 82	36
37	20°406	52 898	°02 471	'330 53	723 44	392 91	37
38	20°034	53 716	°02 554	'322 92	730 10	407 18	38
39	19°658	54 543	°02 640	'315 08	736 74	421 66	39
40	19°277	55 378	°02 731	'307 02	743 34	'436 32	40
41	18°893	56 224	°02 826	'298 71	749 92	'451 21	41
42	18°505	57 979	°02 926	'290 15	756 48	'466 33	42
43	18°113	57 942	°03 032	'281 33	762 99	'481 66	43
44	17°717	58 814	°03 142	'272 23	769 48	'497 25	44
45	17'317	°59 694	°03 259	*262 84	775 93	'513 09	45
46	16'913	°60 583	°03 382	*253 16	782 35	'529 19	46
47	16'506	°61 478	°03 512	*243 17	788 72	'545 55	47
48	16'095	°62 382	°03 649	*232 88	795 06	'562 18	48
49	15'682	°63 291	°03 794	*222 24	801 34	'579 10	49
50	15°266	64 207	°03 947	211 28	*807 58	'596 30	50
51	14'848	65 127	°04 110	199 96	*813 76	'613 80	51
52	14'428	66 051	°04 281	188 31	*819 88	'631 57	52
53	14'007	66 978	°04 463	176 28	*825 93	'649 65	53
54	13'584	67 906	°04 656	163 88	*831 91	'668 03	54

OM

VALUES OF α_x , A_x , P_x . LOGARITHMS OF a_x , A_x , P_x $2\frac{1}{4}$ cent.

x	a_x	A_x	P_x	$\log a_x$	$\log \mathrm{A}_x$	$\log \mathrm{P}_x$	x
55 56 57 58	13°161 12°738 12°316 11°895	·68 838 ·69 767 ·70 698 ·71 626	°04 861 °05 078 °05 309 °05 555	1.151 11 .137 93 .124 37 .110 41	1.837 83 .843 65 .849 41 .855 07	2.686 72 .705 72 .725 04 .744 66	55 56 57 58
59 60 61 62 63	11'475 11'057 10'642 10'230 9'822	72 550 73 468 74 381 75 289 76 185	°05 816 °06 093 °06 389 °06 704 °07 040	°096 03 °081 24 °066 02 °050 39 °034 31	·860 64 ·866 10 ·871 46 ·876 73 ·881 87	.764 61 .784 86 .805 44 .826 34 .847 56	59 60 61 62 63
64 65 66 67	9°419 9°020 8°627 8°240	77 074 77 952 78 817 79 667	°07 398 °07 780 °08 187 °08 622	.017 81 .000 86 0.983 48 .965 65	*886 91 *891 83 *896 62 *901 28	·869 10 ·890 97 ·913 14 ·935 63	64 65 66 67
68 69 70 71 72	7.859 7.486 7.120 6.762 6.412	·80 504 ·81 326 ·82 133 ·82 920 ·83 689	°09 087 °09 584 °10 115 °10 683 °11 291	947 38 928 68 909 54 889 95	'905 82 '910 23 '914 52 '918 66 '922 67	.958 44 .981 55 T.004 98 .028 71 .052 73	68 69 70 71 72
73 74 75 76	6.071 5.740 5.417 5.105 4.802	84 440 85 169 85 878 86 567 87 233	11 942 12 637 13 382 14 180	*849 49 *828 63 *807 35 *785 67 *763 61	'926 55 '930 28 '933 88 '937 35 '940 68	'077 06 '101 65 '126 53 '151 68 '177 07	73 74 75 76 77
77 78 79 80 81	4.510 4.228 3.957 3.696	87 876 88 495 89 092 89 666	'15 034 '15 948 '16 927 '17 974 '19 094	741 16 718 35 695 20 671 73	943 87 946 92 949 84 952 63	202 71 228 57 254 64 280 90	78 79 80 81
82 83 84 85	3°446 3°207 2°978 2°760	'90 217 '90 740 '91 245 '91 723	'20 291 '21 570 '22 937 '24 394	.647 99 .623 95 .599 68	'955 29 '957 80 '960 21 '962 48	'307 30 '333 85 '360 53 '387 28	82 83 84 85
86 87 88 89	2°553 2°356 2°170 1°994	'92 181 '92 615 '93 023 '93 411	25 944 27 597 29 347 31 205	'550 60 '525 82 '501 02 '476 18	'964 64 '966 68 '968 59 '970 40	'414 04 '440 86 '467 57 '494 22 '520 88	86 87 88 89 90
90 91 92 93 94	1.826 1.671 1.522 1.386	'93 782 '94 124 '94 450 '94 748 '95 039	33 180 35 242 37 451 39 703 42 154	'451 24 '426 64 '401 74 '377 75 '353 06	'973 7° '975 2° '976 57 '977 9°	547 06 573 46 598 82 624 84	91 92 93 94
95 96 97 98	1°138 1°023 '929 '836	'95 295 '95 548 '95 755 '95 958	'44 574 '47 241 '49 643 '52 260	329 99 305 90 285 30 263 91	'979 07 '980 22 '981 16 '982 08	649 08 674 32 695 86 718 17	95 96 97 98 99
99 100 101 102	710 556 326 000	'96 237 '96 572 '97 082 '97 800	'56 277 '62 075 '73 217 '97 800	'233 01 '191 93 '122 53 '000 00	'983 34 '984 85 '987 14 '990 34	75° 33 792 92 864 61 99° 34	100 101 102



O^{M}

$2^{\frac{1}{2}}$ per cent.

CONSTANTS.

Constant.	Number.	Logarithm.
i	°025	2.397 940 0
$(1+i)$ $(1+i)^{\frac{1}{2}}$	1.012 422 8	0'010 723 9
$(1+i)^{\frac{1}{4}}$ v	1°006 192 3 °975 609 8	7.989 276 I
$v^{\frac{1}{3}}$ $v^{\frac{1}{4}}$	'987 729 6 '993 845 9	7·994 638 1 7·997 319 0
d δ	'024 390 2 '024 692 6	2·387 216 1 2·392 567 0
		37-3-7

OM

COMMUTATION TABLE

 $2^{\frac{1}{2}}_{\bar{2}\;\text{cent.}}^{\text{per}}$

	1	1			1	1	
v	D_x	\mathbb{N}_x	S_x	C_x	M_x	R_x	x
10	78 120	2 214 979	48 952 817	257.60	24 095'92	1 021 003'74	10
11	75 957	2 136 859	46 737 838	252.81	23 838'32	996 907'82	11
12	73 852	2 060 902	44 600 979	248.82	23 585'51	973 069'50	12
13	71 801	1 987 050	42 540 077	244.87	23 336'69	949 483'99	13
14	69 806	1 915 249	40 553 027	240.97	23 091'82	926 147'30	14
15	67 862	1 845 443	38 637 778	238.46	22 850.85	903 055 48	15
16	65 968	1 777 581	36 792 335	235.93	22 612.39	880 204 63	16
17	64 123	1 711 613	35 014 754	234.67	22 376.46	857 592 24	17
18	62 325	1 647 490	33 303 141	232.70	22 141.79	835 215 78	18
19	60 572	1 585 165	31 655 651	231.90	21 909.09	813 073 99	19
20 21 22 23 24	58 863 57 194 55 567 53 978 52 427	1 524 593 1 465 730 1 408 536 1 352 969 1 298 991	30 070 486 28 545 893 27 080 163 25 671 627 24 318 658	232.34 233.48 234.97 236.79	21 677°19 21 444°99 21 212°65 20 979°17 20 744°20	791 164'90 769 487'71 748 042'72 726 830'07 705 850'90	20 21 22 23 24
25	50 912	1 246 564	23 019 667	238.91	20 507.41	685 106'70	25
26	49 431	1 195 652	21 773 103	241.30	20 268.50	664 599'29	26
27	47 984	1 146 221	20 577 451	244.93	20 027.20	644 330'79	27
28	46 568	1 098 237	19 431 230	247.26	19 782.27	624 303'59	28
29	45 186	1 051 669	18 332 993	250.77	19 535.01	604 521'32	29
30	43 833	1 006 483	17 281 324	254.42	19 284.24	584 986'31	30
31	42 509	962 650	16 274 841	257.29	19 029.82	565 702'07	31
32	41 215	920 141	15 312 191	260.75	18 772.53	546 672'25	32
33	39 949	878 926	14 392 050	263.89	18 511.78	527 899'72	33
34	38 711	838 977	13 513 124	266.73	18 247.89	509 387'94	34
35	37 500	800 266	12 674 147	270.09	17 981°16	491 140.05	35
36	36 315	762 766	11 873 881	273.12	17 711°07	473 158.89	36
37	35 156	726 451	11 111 115	275.85	17 437°95	455 447.82	37
38	34 023	691 295	10 384 664	278.29	17 162°10	438 009.87	38
39	32 915	657 272	9 693 369	281.56	16 883°81	420 847.77	39
40	31 830	624 357	9 036 097	284°14	16 602°25	403 963 96	40
41	30 770	592 527	8 411 740	287°13	16 318°11	387 361 71	41
42	29 732	561 757	7 819 213	290°50	16 030°98	371 043 60	42
43	28 717	532 025	7 257 456	293°54	15 740°48	355 012 62	43
44	27 723	503 308	6 725 431	297°24	15 446°94	339 272 14	44
45	26 749	475 585	6 222 123	300.91	15 149 70	323 825'20	45
46	25 796	448 836	5 746 538	305.17	14 848 79	308 675'50	46
47	24 862	423 040	5 297 702	309.64	14 543 62	293 826'71	47
48	23 946	398 178	4 874 662	314.32	14 233 98	279 283'09	48
49	23 947	374 232	4 476 484	319.74	13 919 66	265 049'11	49
50	22 166	351 185	4 102 252	325'29	13 599'92	251 129'45	50
51	21 300	329 019	3 751 067	331'47	13 274'63	237 529'53	51
52	20 448	307 719	3 422 048	337'71	12 943'16	224 254'90	52
53	19 612	287 271	3 114 329	344'23	12 605'45	211 311'74	53
54	18 790	267 659	2 827 058	351'53	12 261'22	198 706'29	54
						1	

OM

COMMUTATION TABLE

 $2^{\frac{1}{2}}$ PER CENT.

	D	AT			M	D	
x	D_x	\mathbb{N}_x	S_x	C_x	M_x	\mathbb{R}_x	x
55	17 980'	248 869	2 559 399'	358.76	11 900.60	186 445°07	55
56	17 182.	230 889	2 310 530.	366.16	11 550.03	174 535.38	56
57	16 397	213 707.	2 079 641.	373'95	11 184.77	162 984 45	57
58	15 623'	197 310'	1 865 934	381.83	10 810.82	151 799.68	58
59	14 860'	181 687.	1 668 624	389.79	10 428.99	140 988 86	59
60	14 108.	166 827°	1 486 937°	397.36	10 039.50	130 559.87	60
61	13 367.	152 719°	1 320 110'	404.98	9 641.84	120 520.67	61
62	12 636	139 352.	1 167 391	412°19	9 236.86	110 878 83	62
63 64	11 915.	114 801.	1 028 039	418°81 424°87	8 824.67 8 405.86	92 817,30	63
			901 323				
65	0 821.5	93 087.5	786 522	430'19	7 980.99	84 411 44	65
66	9 147'4	83 266.0	682 927'4 589 840'2	434°23	7 550.80 7 116.57	76 430°45 68 879°65	66 67
68	8 487°1	74 118.6	506 574.5	438.78	6 679'32	61 763.08	68
69	7 841.3	65 631.2	432 455.6	438.73	6 240.24	55 083.76	69
70	7 211 3	57 790'2	366 824.1	436.40	2 801.81	48 843'22	70
71	6 598.7	50 578.9	309 033 9	432.80	2 3 9 2 , 1 1	43 041 41	71
72	6 005 0	43 980.2	258 455.0	426.23	4 932°31	37 676.30	72
73	5 432.0	37 975°2	214 474.8	418.23	4 505.78	32 743 99	73
74	4 881.3	32 543'2	176 499.6	407.08	4 087.55	28 238'21	74
75	4 355'1	27 661'9	143 956.4	393'63	3 680.47	24 150.66	75
76	3 855.3	23 306.8	116 294.5	377.75	3 286.84	20 470'19	76
77	3 383.2	19 451.5	92 987.7	359°22	2 909'09	17 183°35	77
78	2 941.8	16 068.0	73 536.2	338.21	2 549 87	14 274 26	78
79	2 531'5	13 156.5	57 468.2	315.69	2 211,36	11 724'39	.79
80	2 154.1	10 594.7	44 342°0	290'94	1 895.67	9 513.03	80
81	1 810.6	8 440.6	33 747 3	264°97	1 604.73	7 617.36	81
82	1 201.2	6 630.0	25 306.7	237.90	1 339'76	6 012.63	82
83	1 227'0	5 128.5	18 676.7	210,32	1 101.86	4 672.87	83
84	986.69	3 901.21	13 548 16	183.03	891.21	3 571.01	84
85	779.58	2 914.82	9 646.65	156.44	708:48	2 679°50	85
86	604'13	2 135.24	6 731.83	130,05	552.04	1 971.02	88
87	458.47	1 531'11	4 596°59 3 065°48	85.853	421'12	1 418·98 997·862	87 88
89	339°93 245'79	732'71	1 992.84	66.856	313,440	684.092	89
90	172.04	486.02	1 260.13	50°742	161.061		90
91	172 94	313°98	773.51	37.139	110'319	456°175	91
92	77.970	195'996	459,525	26.463	73°190	184.795	92
93	49.606	118.056	263'229	17.964	46.727	111.602	93
94	30.431	68°420	145°203	11.876	28.763	64.878	94
95	17.814	37.989	76.783	7.381.4	16.8868	36°115 2	95
96	9'997 5	20'1748	38.794 4	4.466 6	9.202 4	19°228 4	96
97	5.584 0	10.144 3	18.619 6	2'490 1	5.0388	9.7230	
98	2.668 o	4.890 3	8.442 3	1.301 2	2.248 7	4.684 2	
99	1,301 2	2.555 3	3.220	677 2	. 1 247 2	2,132 2	99
100	°592 5	9208	1.329 2	.330 3	.570 0	.888 3	100
101	°247 7	328 3	°408 9	.191 1	°239 7	*318 3	
102	. 080 6	. 080 6	·080 6	.0786	.078 6	.078 6	102

OM LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x , $2\frac{1}{2}$ per

						,	,		
·ť	$\log \mathrm{D}_x$	$\log N_x$	log Cx	$\log \mathrm{M}_x$	col D _{.v}	col N _x	$\operatorname{col} \mathrm{C}_x$	col M _x	x
10	\$\frac{1.892}{.880} \frac{57}{.868} \frac{36}{.856} \frac{13}{.843} \frac{89}{.831} \frac{62}{.831} \frac{62}{	6.345 37	2'410 95	4.381 94	5.107 24	7.654 63	3.589 05	5.618 06	10
11		.329 78	'402 79	377 27	.119 43	.670 22	.597 21	.622 73	11
12		.314 06	'395 88	372 65	.131 64	.685 94	.604 12	.627 35	12
13		.298 21	'388 94	368 04	.143 87	.701 79	.611 06	.631 96	13
14		.282 23	'381 97	363 46	.156 11	.717 77	.618 03	.636 54	14
16	'819 33	'249 83	'372 79	354 35	'180 67	750 17	627 21	645 65	16
17	'807 02	'233 41	'370 45	349 79	'192 98	766 59	629 55	650 21	17
18	'794 66	'216 82	'366 79	345 21	'205 34	783 18	633 21	654 79	18
19	'782 27	'200 07	'365 31	340 62	'217 73	799 93	634 69	659 38	19
20	769 84	183 15	365 86	'336 00	'230 16	.816 85	634 14	664 00	20
21	757 35	166 05	366 13	'331 33	'242 65	.833 95	633 87	668 67	21
22	744 82	148 77	368 25	'326 59	'255 18	.851 23	631 75	673 41	22
23	732 22	131 29	371 02	'321 79	'267 78	.868 71	628 98	678 21	23
24	719 55	113 61	374 37	'316 90	'280 45	.886 39	625 63	683 10	24
25	'706 82	'095 71	'378 24	'311 91	'293 18	'904 29	621 76	.688 og	25
26	'694 00	'077 60	'382 55	.306 82	'306 00	'922 40	617 45	.693 18	26
27	'681 10	'059 27	'389 04	'301 62	'318 90	'940 73	610 96	.698 38	27
28	'668 09	'040 70	'393 16	'296 28	'331 91	'959 30	606 84	.703 72	28
29	'655 00	'021 88	'399 27	'290 81	'345 00	'978 12	600 73	.709 19	29
30	.641 80	002 81	'4°5 55 '41° 42 '41° 23 '42° 43 '42° 67	285 20	358 20	-'997 19	594 45	714 80	30
31	.628 48	5'983 47		279 43	371 52	6'016 53	589 58	720 57	31
32	.615 06	'963 85		273 52	384 94	'036 15	583 77	726 48	32
33	.601 51	'943 95		267 45	398 49	'056 05	578 57	732 55	33
34	.587 83	'923 75		261 21	412 17	'076 25	573 93	738 79	34
35	'574 °3	'903 23	'431 51	254 82	'425 97	°096 77	*568 49	745 18	35
36	'560 °09	'882 39	'436 36	248 24	'439 91	°117 61	*563 64	751 76	36
37	'546 °0	'861 21	'440 68	241 50	'454 00	°138 79	*559 32	758 50	37
38	'531 77	'839 66	'444 50	234 57	'468 23	°160 34	*555 50	765 43	38
39	'517 39	'817 75	'449 57	227 47	'482 61	°182 25	*550 43	772 53	39
40	'502 84	795 43	453 53	'220 17	*497 16	204 57	546 47	779 83	40
41	'488 13	772 71	458 08	'212 67	*511 87	227 29	541 92	787 33	41
42	'473 23	749 55	463 15	'204 96	*526 77	250 45	536 85	795 04	42
43	'458 14	725 93	467 67	'197 02	*541 86	274 07	532 33	802 98	43
44	'442 84	701 83	473 11	'188 84	*557 16	298 17	526 89	811 16	44
45	'427 31	677 23	'478 44	'180 40	572 69	'322 77	°521 56	*819 60	45
46	'411 55	652 09	'484 54	'171 69	588 45	'347 91	°515 46	*828 31	46
47	'395 53	626 38	'490 86	'162 67	604 47	'373 62	°509 14	*837 33	47
48	'379 23	600 08	'497 37	'153 32	620 77	'399 92	°502 63	*846 68	48
49	'362 62	573 14	'504 80	'143 63	637 38	'426 86	°495 20	*856 37	49
50	'345 68	545 54	'512 27	°133 54	.654 32	'454 46	'487 73	·866 46	50
51	'328 37	517 22	'520 45	°123 02	.671 63	'482 78	'479 55	·876 98	51
52	'310 66	488 15	'528 55	°112 04	.689 34	'511 85	'471 45	·887 96	52
53	'292 52	458 29	'536 85	°100 56	.707 48	'541 71	'463 15	·899 44	53
54	'273 92	427 58	'545 96	°088 53	.726 08	'572 42	'454 04	·911 47	54
			NT.	= D+ I					

OM LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x , $2^{\frac{1}{2}}_{2}$ cent.

x	$\log \mathrm{D}_x$	$\log \mathbb{N}_x$	$\log \mathrm{C}_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	col C _x	$\operatorname{col} \operatorname{M}_x$	x
55 56 57	4 ² 54 78 235 08 214 77	5'395 97 '363 40 '329 82	2.554 80 .563 67 .572 81	4°075 90 °062 62 °048 63	5.745 22 .764 92 .785 23	6.604 03 .636 60 .670 18	3.445 20 .436 33 .427 19	5.924 10 .937 38 .951 37	55 56 57
58 59	193 77	295 15 259 32	·581 87 ·590 83	033 86	*806 23 *827 97	704 85 740 68	'418 13 '409 17 '400 82	.966 14 .981 76 .998 30	58 59 60
60 61 62	149 47 126 02 101 60	183 89 144 II	.607 43 .615 10	001 70 3.984 16 965 52	·850 53 ·873 98 ·898 40	·816 11	39 ² 57 384 90	4.015 84 .034 48	61 62 63
63 64	'076 11 '049 45	'102 83 '059 94	.622 02 .628 26	'945 70 '924 58	'923 89 '950 55 '978 49	·897 17 ·940 06 ·984 66	377 98 371 74 366 34	°054 30 °075 42 °097 94	64 65
65 66 67 68 69	'021 51 3'992 17 '961 30 '928 76 '894 39	'015 34 4'968 89 '920 47 '869 93 '817 11	633 66 637 72 640 73 642 25 642 20	'902 06 '877 99 '852 27 '824 73 '795 22	978 49 4.007 83 .038 70 .071 24 .105 61	5.031 11 .079 53 .130 07 .182 89	362 28 359 27 357 75 357 80	122 01 147 73 175 27 204 78	66 67 68 69
70 71 72 73	.858 02 .819 46 .778 51 .734 96	761 85 703 97 643 26 579 50	640 18 636 29 629 95 621 41	763 56 729 58 693 05 653 77	'141 98 '180 54 '221 49 '265 04	'238 15 '296 03 '356 74 '420 50	359 82 363 71 370 05 378 59	236 44 270 42 306 95 346 23	70 71 72 73
74 75 76 77 78	688 54 639 00 586 06 529 37 468 61	'512 46 '441 88 '367 48 '288 95 '205 96	.609 68 .595 09 .577 21 .555 36 .529 57	'565 90 '516 78 '463 76 '406 52	'311 46 '361 00 '413 94 '470 63 '531 39	'487 54 '558 12 '632 52 '711 05 '794 04	'390 32 '404 91 '422 79 '444 64 '470 43	'388 54 '434 10 '483 22 '536 24 '593 48	74 75 76 77 78
79 80 81 82	'403 38 '333 26 '257 82 '176 52	'118 14 '025 09 3'926 37 '821 51	'499 26 '463 81 '423 19 '376 39	'344 66 '277 76 '205 40 '127 03	.596 62 .666 74 .742 18 .823 48	.881 86 .974 91 4.073 63 .178 49	500 74 536 19 576 81 623 61	.655 34 .722 24 .794 60 .872 97 .957 86	79 80 81 82 83
83 84	.088 83 2.994 18	'709 99 '591 23	'322 95 '262 53	2.950 13	3.005 82 .108 14	'290 01 '408 77 '535 39	677 05 737 47 805 64	3.049 87	84 85
85 86 87 88 89	.891 86 .781 13 .661 31 .531 39 .390 56	'464 61 '329 44 '185 01 '030 45 2.864 93	194 36 117 02 030 81 1933 76 825 14	.850 33 .741 97 .624 41 .496 61 .357 78	218 87 338 69 468 61 609 44	335 39 ·670 56 ·814 99 ·969 55 -3.135 07	*882 98 *969 19 2*066 24 *174 86	258 03 375 59 503 39 642 22	86 87 88 89
90 91 92 93 94	237 89 071 79 1.891 93 695 53 483 32	.687 46 .496 90 .292 25 .071 98 1.835 18	705 37 569 71 422 64 254 41 074 65	206 99 042 65 1864 45 669 57 458 83	.762 11 .928 21 2.108 07 .304 47 .516 68	'312 54 '503 10 '707 75 '928 02 2:164 82	294 63 430 29 577 36 745 59 925 35	793 01 957 35 2.135 55 330 43 541 17	90 91 92 93 94
95 96 97 98 99	.250 75 0.999 89 .723 21 .426 18 .114 43	'579 66 '304 81 '007 62 0'689 34 '346 80	0.868 14 .649 98 .396 22 .114 43 1.830 70		.749 25 1.000 11 .276 79 .573 82 .885 57	'420 34 '695 19 '992 38 T'310 66 '653 20	7.131 86 .350 02 .603 78 .885 57 0.169 30	772 45 1 022 03 297 67 593 68 904 06	95 96 97 98 99
100 101 102	7.772 71 394 01 2.906 17	1.964 17 516 27 2.906 17	·518 95 ·207 20 2·895 44	T.755 87 379 67	0.227 29 605 99 1.093 83	0.032 83	.481 05 .792 80 1.104 56	0°244 13 °620 33 1°104 56	100 101 102

$$\mathbb{N}_x = \mathbb{D}_x + \mathbb{D}_{x+1} + \dots$$

$$\mathbb{S}_x = \mathbb{N}_x + \mathbb{N}_{x+1} + \dots$$

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VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x

 $2^{\frac{1}{2}}$ PER CENT.

0		ALUES OF	coa, rra, r	2, 222, 2			■2 CENT
x	Cl _x	\mathbf{A}_x	P_x	\overline{a}_x	$\overline{\mathbf{A}}_x$	$\overline{\mathrm{P}}_x$	$\begin{bmatrix} x \\ - \end{bmatrix}$
10 11 12 13 14	27.354 27.133 26.906 26.675 26.437	.30 845 .31 383 .31 937 .32.502 .33 080	'01 088 '01 116 '01 144 '01 174 '01 206	27.852 27.631 27.404 27.173 26.935	*31 226 '31 772 '32 332 '32 903 '33 490	*01 121 *01 150 *01 180 *01 211 *01 243	10 11 12 13 14
15	26.194	33 673	'01 238	26.692	'34 090	'01 277 '01 312 '01 349 '01 387 '01 427	15
16	25.947	34 278	'01 272	26.445	'34 700		16
17	25.692	34 896	'01 307	26.190	'35 330		17
18	25.434	35 526	'01 344	25.932	'35 967		18
19	25.170	36 170	'01 382	25.668	'36 619		19
20	24.627	36 826	'01 422	25'399	'37 283	°01 468	20
21	24.627	37 496	'01 463	25'125	'37 960	°01 511	21
22	24.348	38 174	'01 506	24'846	'38 649	°01 556	22
23	24.065	38 866	'01 551	24'563	'39 348	°01 602	23
24	23.777	39 569	'01 597	24'275	'40 059	°01 650	24
25	23.484	'40 280	'01 645	23.982	'40 782	'01 701	25
26	23.188	'41 003	'01 695	23.686	'41 513	'01 753	26
27	22.888	'41 737	'01 747	23.386	'42 254	'01 807	27
28	22.583	'42 481	'01 801	23.080	'43 009	'01 863	28
29	22.275	'43 232	'01 858	22.772	'43 770	'01 922	29
30	21.962	'43 995	'01 916	22'459	'44 543	'01 983	30
31	21.646	'44 766	'01 977	22'143	'45 323	'02 047	31
32	21.325	'45 547	'02 040	21'822	'46 116	'02 113	32
33	21.001	'46 338	'02 106	21'498	'46 916	'02 182	33
34	20.673	'47 139	'02 175	21'170	'47 726	'02 254	34
35	20'340	'47 950	'02 247	20°837	'48 548	°02 330	35
36	20'004	'48 770	'02 322	20°501	'49 378	°02 409	36
37	19'663	'49 602	'02 400	20°160	'50 220	°02 491	37
38	19'319	'50 443	'02 483	19°816	'51 069	°02 577	38
39	18'969	'51 296	'02 569	19°466	'51 933	°02 668	39
40	18.615	52 159	°02 659	19'112	52 807	°02 763	40
41	18.257	53 032	°02 754	18'754	53 691	°02 863	41
42	17.894	53 918	°02 854	18'391	54 588	°02 968	42
43	17.526	54 813	°02 959	18'023	55 497	°03 079	43
44	17.155	55 719	°03 069	17'652	56 413	°03 196	44
45	16.780	.56 636	'03 185	17'277	57 339	°03 319	45
46	16.399	.57 563	'03 308	16'896	58 279	°03 449	46
47	16.016	.58 498	'03 436	16'513	59 225	°03 587	47
48	15.628	.59 442	'03 575	16'125	60 183	°03 732	48
49	15.238	.60 396	'03 720	15'735	61 146	°03 886	49
50 51 52 53 54	14.844 14.447 14.049 13.648 13.245	61 356 62 323 63 297 64 275 65 254	°03 873 °04 035 °04 206 °04 388 °04 581	15'341 14'944 14'546 14'144 13'741	62 119 63 099 64 082 65 075	'04 049 '04 222 '04 405 '04 601 '04 808	50 51 52 53 54

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VALUES OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

 $2^{\frac{1}{2}}_{2}^{\text{per}}$

x	α_x	A_x	P_x	\overline{a}_x	$\overline{\mathrm{A}}_{x}$	$\overline{\mathrm{P}}_x$	x
55 56 57 58	12.842 12.438 12.033 11.629	·66 240 ·67 226 ·68 212 ·69 197	°04 786 °05 003 °05 234 °05 479	13.338 12.529 12.125	·67 065 ·68 063 ·69 063 ·70 060	*05 028 *05 262 *05 512 *05 778	55 56 57 58
59	11'226	'70 179 '71 159 '72 134 '73 100	°05 740	11.722	71 055	°06 062	59
60	10'825		°06 018	11.321	72 045	°06 364	60
61	10'425		°06 313	10.920	73 036	°06 688	61
62	10'028		°06 628	10.523	74 016	°07 034	62
63 64 65	9°635 9°245 8°859	74 061 75 012 75 954	°06 964 °07 322 °07 704	9°739 9°353	74 986 75 951 76 904	°07 402 °07 798 °08 222	63 64 65
66	8·478	76 881	°08 112	8.972	77 845	*08 676	66
67	8·103	77 798	°08 547	8.597	78 773	*09 163	67
68	7·733	78 699	°09 012	8.227	79 686	*09 686	68
69	7·370	79 585	°09 508	7.863	80 584	*10 248	69
70	7°014	.80 453	10 039	7°5°7	'81 464	'10 853	70
71	6°665	.81 306	10 607	7°157	'82 327	'11 502	71
72	6°324	.82 137	11 215	6°816	'83 170	'12 202	72
73	5°991	.82 949	11 865	6°482	'83 993	'12 957	73
74	5°667	.83 738	12 560	6°158	'84 795	'13 771	74
75	5°352	*84 508	13 305	5.842	*85 575	'14 649	75
76	5°045	*85 255	14 103	5.535	*86 333	'15 598	76
77	4°749	*85 979	14 956	5.238	*87 067	'16 623	77
78	4°462	*86 678	15 869	4.950	*87 777	'17 733	78
79	4°185	*87 353	16 847	4.672	*88 463	'18 934	79
80	3'918	*88 004	17 892	4°4°4	'89 124	°20 235	80
81	3'662	*88 630	19 012	4°147	'89 760	°21 646	81
82	3'416	*89 230	20 208	3°899	'90 371	°23 176	82
83	3'180	*89 807	21 486	3°662	'90 957	°24 836	83
84	2'954	*99 355	22 851	3°435	'91 518	°26 641	84
85	2.739	90 880	°24 306	3.218	92 053	'28 601	85
86	2.534	91 378	°25 854	3.012	92 562	'30 728	86
87	2.340	91 854	°27 504	2.816	93 047	'33 046	87
88	2.155	92 304	°29 252	2.630	93 507	'35 559	88
89	1.981	92 730	°31 106	2.453	93 943	'38 297	89
90 91 92 93 94	1.816 1.661 1.514 1.379 1.248	93 132 93 510 93 869 94 198	33 °77 35 136 37 342 39 59° 42 °39	2°285 2°128 1°978 1°840 1°706	94 357 94 745 95 117 95 456 95 788	41 293 44 521 48 095 51 876 56 154	90 91 92 93 94
95	1°133	'94 798	44 45 ² 47 115 49 512 52 117	1.586	'96 083	60 574	95
96	1°018	'95 078		1.467	'96 376	65 674	96
97	°925	'95 306		1.370	'96 617	70 523	97
98	°833	'95 530		1.273	'96 857	76 085	98
99 100 101 102	708 '554 '325 '000	'95 832 '96 197 '96 752 '97 561	61 901 73 013 97 561	1°142 '983 '748 '415	'97 180 '97 573 '98 154 '98 975	'85 081 '99 280 1'31 310 2'38 361	99 100 101 102

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LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x 2\frac{1}{2} cent.

x	$\log a_x$	$\log \mathrm{A}_x$	$\log P_x$	$\log ar{a}_x$	$\log \overline{\mathbf{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
10 11 12 13 14	1°452 61 °449 21 °445 70 °442 08 °438 34	1'489 18 '496 70 '504 29 '511 91 '519 57	2.036 57 .047 49 .058 59 .069 83 .081 23	1.444 86 .441 40 .437 81 .434 14 .430 32	1:494 52 :502 04 :509 63 :517 24 :524 92	2'049 64 '060 66 '071 81 '083 11 '094 61	10 11 12 13 14
15 16 17 18 19	'434 48 '430 50 '426 39 '422 16 '417 80	'527 28 '535 02 '542 77 '550 55 '558 35	'092 80 '104 52 '116 38 '128 39 '140 55	'426 38 '422 34 '418 14 '413 84 '409 39	'532 63 '540 33 '548 14 '555 90 '563 71	'106 26 '118 00 '130 01 '142 08 '154 30	15 16 17 18 19
20 21 22 23 24 25	413 31 408 70 403 95 399 07 394 06	566 16	152 85 165 28 177 82 190 50 203 29	'404 82 '400 11 '395 26 '390 28 '385 16	571 51 579 33 587 14 594 92 602 70	°166 70 °179 21 °191 87 °204 64 °217 54 °230 58	20 21 22 23 24 25
26 27 28 29	383 60 378 17 372 61 366 88	612 82 620 52 628 19 635 81	229 22 242 35 255 58 268 93 282 39	379 49 '374 49 '368 96 '363 24 '357 40 '351 39	618 18 625 87 633 56 641 18	243 68 243 68 256 91 270 33 283 78	26 27 28 29
31 32 33 34 35	354 99 348 79 342 44 335 92	.650 95 .658 46 .665 94 .673 38	*295 96 *309 67 *323 50 *337 46	345 24 338 89 332 40 325 72	656 32 663 85 671 32 678 76	'311 08 '324 96 '338 91 '353 03	31 32 33 34 35
36 37 38 39 40	'322 30 '315 21 '307 89 '300 36	'688 15 '695 50 '702 80 '710 08	365 85 380 29 394 91 409 72	'311 78 '304 49 '297 02 '289 28 '281 31	'693 53 '700 88 '708 16 '715 44 '722 69	'381 76 '396 39 '411 15 '426 17	36 37 38 39 40
41 42 43 44 45	*284 58 *276 32 *267 79 *258 99	724 54 731 73 738 88 746 00	'439 96 '455 41 '471 09 '487 01	'273 °9 '264 61 '255 83 '246 79	729 90 737 10 744 27 751 38	'456 81 '472 49 '488 44 '504 58	41 42 43 44 45
46 47 48 49 50	'240 54 '230 85 '220 85 '210 52	760 14 767 14 774 09 781 01	*519 60 *536 29 *553 24 *570 49 *588 00	'227 78 '217 83 '207 50 '196 87	765 51 772 51 779 47 786 37	537 73 554 68 571 98 589 50	46 47 48 49 50
51 52 53 54	188 85 177 49 165 77 153 66	794 65 801 38 808 04 814 61	605 80 623 89 642 27 660 95	174 47 162 74 150 57 138 02	'800 02 '806 74 '813 41 '820 00	625 56 644 00 662 84 681 98	51 52 53 54

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Logarithms of a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

 $2^{rac{1}{2}}$ per cent.

				,	,	,	12 CENT
x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \bar{a}_x$	$\log \overline{\mathbf{A}}_x$	$\log \overline{\mathbb{P}}_x$	x
55 56	1.141 19	1.821 12 .827 54	2.679 93 .699 22	1'125 09	1.826 50 .832 91	2.701 40 .721 18	55 56
57	115 05	*833 86	'71881	097 92	839 25	'741 33	57
58	101 38	*840 09	.738 71	*083 68	*845 47	.761 79	58
59	'087 29	.846 21	.758 92	°069 00	.821 29	'782 59	59
60	072 80	*852 23	779 43	.053 88	·857 6o	.803 72	60
61	'057 87	.858 14	*800 27	.038 22	.863 54	*825 31	61
62	042 51	'863 92	821 41	022 14	'869 33	*847 18	62
63 64	°026 72 °010 49	·869 59	·842 87 ·864 64	°005 61	·874 98 ·880 53	.869 37 .892 00	63 64
65			·886 72		1	1	
66	°993 83	*880 55 *885 82	909 10	'970 97	'885 95 '891 23	914 98	65
67	970 72	890 97	931 80	'952 90 '934 33	1896 38	'938 33 '962 05	67
68	939 -7	895 97	954 80	934 33	901 38	986 16	68
69	922 72	900 83	978 11	.895 59	906 25	1.010 64	69
70	903 83	905 54	Ī'001 71	.875 44	.910 97	°035 55	70
71	.884 51	910 12	02561	·854 76	915 54	*060 77	71
72	.864 75	914 54	·049 79	*833 52	'919 97	.086 43	72
73	·844 54	91881	'074 27	·811 74	924 24	112 50	73
74	.823 92	922 92	.099 00	'789 41	'928 37	138 97	74
75	·802 88	°926 90	124 02	·766 55	932 35	16581	75
76	.781 42	930 72	149 30	°743 10	.936 18	193 07	76
77	'759 58	'934 39	17481	'719 13	.939 82	*220 71	77
78	737 35	937 91	*200 56	'694 60	*943 38	*248 78	78 79
79	'714 76	'941 28	*226 52 .	.669 21	' 946 76	277 24	
80	691 83	944 50	252 67	643 90	*949 99	306 10	80
81 82	.668 55 .644 99	947 58	°279 03	617 71	°953 08	'335 38 '365 04	81 82
83	621 16	'950 51 '953 31	'305 52 '332 15	*591 00 *563 75	958 84	305 04	83
84	·597 °5	955 95	358 90	535 95	950 51	425 55	84
85	572 75	958 47	385 72	507 65	964 04	456 38	85
86	548 31	960 84	412 53	478 90	966 43	487 53	86
87	523 70	.963 10	'439 40	449 59	.968 70	519 12	87
88	'499 o 6	965 22	·466 16	°419 89	970 84	.550 95	88
89	474 37	'967 22	*492 85	*389 70	972 86	.283 16	89
90	449 57	.969 10	·519 53	358 91	974 77	.612 88	90
91	425 11	.970 86	*545 75	327 99	.976 56	648 56	91
92 93	'400 32	972 52	572 20	'296 16	978 26	682 10	92 93
94	376 45 351 86	974 04	*597 59	°264 84	°979 80	714 97 749 38	93
95		'975 51	623 65	°231 93			
96	'328 91 '304 92	°976 80 °978 08	°647 89	.166 28	'982 65 '983 97	.782 29 .817 39	95 96
97	284 41	979 12	69471	136 72	985 05	*848 33	97
98	263 16	980 14	.716 98	104 83	.986 13	·881 30	98
99	'232 37	.981 51	'749 14	°057 74	987 58	92983	99
100	191 46	'983 16	'791 70	ī'992 47	'989 33	·996 86	100
101	122 26	·985 66	.863 40	.873 61	.991 91	0,11830	101
102	'000 00	.989 27	989 27	618 29	995 53	377 23	102

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VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}$ PER CENT.

Dura-	10	II	12	13	14	15	16	17	18	19	Dura-
tism.	27:354	27:133	26.906	26.675	26.437	26.194	25.947	25.692	25.434	25.170	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	000	0
1	'972	972	972	'972	972	'972	972	.972	972	'972	1
2	1.018	1,018	1.917	1.012	1.012	1.014	1.917	1.012	1,916	1.016	2
3	2.837	2.837	2.836	2.836	2.836	2.835	2.835	2.835	2.834	2.833	3
4	3.430	3.430	3.430	3.729	3.729	3.728	3.727	3.426	3.726	3.725	4
5	4.299	4.599	4.298	4°597	4.296	4.595	4.594	4.593	4.295	4.290	5
6	5'443	5°443	5.442	5°441	5.440	5.438	5'437	5.435	5.433	5.431	6
7 8	6.564	6.263	6.565	6.561	6.259	6.257	6.255	6.252	6.250	6.247	7
9	7.838	7.836	7.059	7.831	7°055 7°828	7.052	7.050	7.046	7.813	7°039 7°808	8
10	8.291	8.289	8.586 9.317	8.283 9.313	8.579	8.575	8°571 9°298	8.266	8.260	8.554	10
2	9'323	9°320	10.027	10.022	9.309	0,304	10.004	9'292	9°285 9°988	9°277	1 2
3	10.722	10'721	10.416	10'711	10'704	10.697	10.680	10.680	10.670	9'979	3
4	11.397	11.391	11.385	11.379	11'371	11.363	11.323	11.343	11,335	11,310	4
15	12.048	12'042	12.035	12.027	12,018	12'000	11.008	11.086	11'973	11.928	15
6	12.681	12.674	12.666	12.657	12.646	12.635	13.653	12.600	12.294	12°577	6
7	13'295	13'287	13'277	13.267	13.255	13.242	13.228	13'212	13'195	13.177	7
8	13.891	13.885	13.871	13.859	13.846	13.831	13.812	13.797	13'778	13'757	8
8	14.470	14°459	14.447	14'433	14.418	14'402	14.383	14.364	14.342	14.319	9
20	15.031	15.019	15.002	14.990	14.973	14.954	14.934	14.912	14.888	14.862	20
1	15.575	15.261	15.246	15.29	15.210	15.489	15.467	15.442	15.416	15'388	1
2	16.103	16.084	16.040	16.021	16.030	16.002	15.083	15.026	15'927	15.896	2
3	16.614	16.297	16.578	16.222	16.534	16.200	16.482	16.452	16'421	16.387	3
4	17.109	17.090	17.069	17.046	17'021	16.994	16.964	16.932	16.898	16.861	4
25	17.290	17.269	17.545	17.20	17.493	17.463	17.431	17:396	17.358	17.318	25
6	18.024	18'031	18.006	17.979	17'949	17'916	17.881	17.844	17.803	17.760	6
8	18.204	18'479	18.452	18.422	18.389	18.354	18.317	18.276	18.232	18.186	7 8
9	19,361	19,335	19.299	19.265	19.227	19,189	18.737	18.693	18.646	18.296 18.992	9
30				19.665							30
1	19.769	19'737	19,405	20.021	20.007	19.280	19,233	19'483	19'429	19'372	1
2	20.243	20.206	20.466	20'423	20.377	20.327	20.523	20.519	20.122	20.000	.2
3	20,011	20.871	20.828	20.783	20.733	20.679	20.622	20.262	20.497	20.427	3
4	21.566	21'223	21'178	21'129	21.076	21.019	20.958	20.894	20.825	20'751	4
35	21.608	21.263	21.214	21.462	21'406	21.346	21,581	21.513	21.130	21.061	35
6	21.038	21.890	21.839	21.483	21.723	21.660	21.291	21.219	21.441	21.358	6
7	22.522	22.500	22,121	22.005	22,050	21,961	21.889	21.812	21'729	21.642	7
8	22.263	22.209	22,421	22.389	22.321	22°250	22.174	22.003	22.002	51,015	8
9.	22.858	22.801	22.739	22.673	22.602	22.22	22.446	22,360	22'268	22'170	9
40	23.145	23'081	23.016			22'792	22.707	22.616	22.219	22.416	40
1 2	23.414	23.350	23.282			23.045	22.022	22.859	22.757	22.649	1
3	23.676	23.856	23.536			23.287	23'192	23,001	22,108	22.869	2 3
4	24.168	24.093	24.015	23.036	23.834	23.436	23.631	23,211	23'198	23.275	4
45	24.398	24'319	24.534	24'144	24.047	23.944	23.834	23,717		23,460	45
6	24.618	24°535	24.446	24.351	24 047	24'141	24'025	53,005	23.592	23.633	6
7	24.828	24.741	24.647	24.247	24.440		24.500	24.077	23.040	23.795	7
8	25.028	24.936	24.838	24.734	24.621	24.202	24.376	24.241	24.098	23.946	8
9	22.518	25.155	25.019	24.010	24.792	24.668	24°535	24.394	24.545	24.086	9
WildhamT	10	II	12	13	14	15	16	17	18	19	
8	-			13	14	15					0

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VALUES OF TEMPORARY ANNUITIES OF 1

	20	21	22	23	24	25	26	27	28	29	
Dura- tion.		24:627		24.065		23:484	23.188	22.888	22.583		Dura-
	24.901		24:348		23.777					22.275	
0	.000	,000	000	'000	'000	.000	.000	.000	,000	.000	0
1 2	.972 1.916	972	.971	1.914	'971 1'914	971	1.913	1'912	1'912	970	1 2
3	2.833	2.832	5.831	2.830	2.829	2.828	2.827	2.826	2.824	2.823	3
4	3.723	3.455	3.451	3'719	3'717	3.416	3.714	3.415	3.709	3.404	4
5	4.288	4.286	4.284	4.282	4.579	4.577	4.574	4.571	4.267	4.264	5
в	5.428	5'425	5'422	5.419	5'415	5'412	5'407	5.403	5'399	5'394	6
7	6.243	6.540	6.532	6.531	6.226	6.551	6.519	6.510	6.304	6.194	7
8	7.034	7.030	7.024	7.019	7.012	7.006	6.999	6.991	6.984	6.975	8
9	7.802	7.796	7.789	7.782	7.774	7.766	7.757	7.748	7.739	7.728	9
10	8.547	8.539	8.231	8.522	8.213	8.203	8.492	8.481	8.469	8.457	10
1	9.269	9.260	9.250	9.239	9.228	9.216	9.203	9,190	9.176	9,191	1
2	9.969	9.958	9.947	9'934	9.921	9.006	9.892	9.876	9.860	9.842	2
3	10.648	10.632	10,051	10.607	10,201	10°575	10.222	10.239	10.20	10,200	3
4	11,302	11,501	11.572	11.528	11'240	11'221	11,501	11,180	11.120	11:136	4
15	11.945	11.926	11,008	11,889	11.868	11.846	11.824	11,800	11.776	11.749	15
6	12.229	12.240	12.250	12°498	12°475	12°451	12.425	12.308	12,341	12.341	6
7	13.124	13.132	13'112	13.088	13.065	13.032	13.006	12.976	12.945	12.015	7
8	13.735	13.411	13.685	13.658	13.629	13.299	13.267	13°534	13°499	13,465	8 9
	1					14'143			14.033	13,005	
20	14.834	14.805	14.774	14'741	14.706	14.669	14.630	14.589	14.547	14'502	20
2	15.357	15.827	15.790	15.750	15.216	15'175	12,133	15.269	15.042	14.993	2
3	16.320	19.315	16.54	16.558	16.185	16.134	16.084	16,031	15'976	15'917	3
4	16.821	16.780	16.735	16.689	16.639	16.284	16.235	16.475	16.412	16,321	4
25	17.276	17'231	17.183	17.135	17.079	17.022	16.063	16.001	16.836	16.767	25
6	17.714	17.665	17.614	17.559	17.201	17.441	17.377	17.309	17.239	17.164	6
7	18.136	18.084	18.058	17'970	17.908	17.842	17.773	17.701	17.625	17.545	7
8	18.243	18.487	18.427	18.364	18.298	18.227	18.124	18.076	17'994	17.908	8
9	18.935	18.875	18.811	18.743	18.672	18.296	18.217	18.434	18.346	18.253	9
30	19.311	19'247	19'179	19'107	19'030	18.950	18.865	18.776	18.682	18.582	30
1	19.673	19.605	19.232	19'455	19'373	19'287	19'197	10,101	19,001	18.894	1
2	20'020	19'947	19.870	19.788	19.701	19.609	19.213	19'411	19.304	19,190	2
3	20.324	20.276	20,133	20,100	20'014	19.016	19.813	19.705	19.291	19.470	3
4	20.673	20.290	20,205	20,410	20,315	20'208	20'099	19.983	19.862	19.734	4
35	20.978	20.891	20.798	20.699	20.202	20.482	20.369	20.247	50,118	19.985	35
6	21,540	21.148	21.079	20.972	20.864	20.748	20.625	20°495	20.320	20'214	6
8	21.249	21.451	21.346	21,536	51,110	20.996	20.866	20'729	20.282	20,431	8
9	21.814	21.710	21.841	21'484	21,360	21,720	21,003	20'948	20.795	20.634	9
		21.957		21'718	1	21'450	21,302	21,125	20,005		
40	22.306			21,038		21.840				20.002	40
2	22.23	22,415	22,484		55,005 55,005	21,849		21.250 51.250	21'343	51,301	2
3	22,40	22.816	22.673	22.233		55.196	22'019		21.639	21,434	3
4	23.141	23,000	22.820	55.695	22.252	22,320	55,162	21,941	21.768	21.224	4
45	23.319	23.141	23.012	22.849	22.675	22.491	22,500	22.096	21.885	21.662	45
6	23.486	23,331	23.164	22,049	55.815	25.651	22,450	22,500		21.758	6
7	23.642	23.480			22.938	22.739	22.230	_	22.083	21.844	7
8	23.786	23.617	23.438		23.023	22.845	22.629	22'402	22,199	21,010	8
9	23.919	23.743	23.557	23.362	23.126	22.941	22.717	22.482	22.538	21.084	9
	20	21	22	23	24	25	26	27	28	29	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	30	31	32	33	34	35	36	37	38	39	CENT
Eine.	21:962	21.646	21.325	21.001	20.673	20.340	20.004	19.663	19:319	18.969	Dura- tion.
0	,000	.000	,000	,000	.000	.000	.000	.000	.000	000°	0
1	'970	'970	°969	969	'969		.968	.968	'967	.967	1
2	1.011	1,000	1.000	1.008	1.907		1.905	1.904	1.903	1'902	2
3	2.821	2.820	2.818	2.817	2.815	2.813	5.811	2.809	2.807	2.805	3
4	3.702	3.405	3.400	3.697	3.694	3.691	3.688	3.682	3.681	3.678	4
5	4.260	4.256	4.552	4.248	4°544	4.240	4.535	4.230	4.25	4.20	5
6	5.389	5.383	5.378	5'372	5.366	5.360	5.354	5'347	5.340	5.333	6
7	6.191	6.184	6.177	6,169	6,161	6.123	6.142	6.136	6.156	6.119	7
8	6.967	6.928	6.949	6.939	6.929	6.919	6.908	6.897	6.882	6.872	8
9	7.718	7.707	7.695	7'684	7.671	7.658	7.645	7.630	7.615	7'599	8
10	8.444	8.431	8.417	8.402	8.384	8.371	8.352	8.338	8.319	8.299	10
1	9.146	9,130	9'114	9.096	9.078	9.029	9.040	6.010	8.996	8.973	1
2	9.824	9.806	9.786	9.766	9.745	9'722	9.699	9.674	9'648	9.620	2
3	10.479	10.458	10'435	10'412	10.384	10.361	10.334	10.302	10'274	10'241	3
4	11,115	11.084	11,001	11.034	11,009	10'975	10.944	10,011	10.872	10.837	4
15	11.722	11.694	11.664	11,633	11,001	11.264	11.231	11,492	11,451	11,408	15
8	12,311	12'279	12'245	12'210	12.173	12'135	12'094	12.020	12'004	11.954	6
7 8	12.878	12.842	12.802	12.765	12.724	12.680	12.634	12.282	12.232	12'476	7
9	13.424	13'384	13.342	13.810	13.252	13.203	13.121	13.282	13.037	12.974	8 9
		-			13.759	13.704			13.219	13.449	_
20	14.456	14.407	14'355	14.301	14.244	14.183	14.119	14.021	13.978	13.000	20
1 2	14.942	14.888	14.831	14'772	14.708	14.642	14.271	14'496	14.415	14.329	1
3	15.408	15.349	15.723	12.622	15.12	15'079	15.410	15.350	15.223	14.735	2 3
4	16.584	16.514	16.140	16.065	15.979	15.892	15.410	15.400	15.223	15.481	4
25	16.694	16.618		16.453	16.363	16.568	16.164	16.029	15.944	15.821	25
6	17.086	17.004	16.238	16.825	16.728	16.624	16.212	16.398	16.274	16.141	6
7	17.460	17.372	17.277	17.178	17.073	16.961	16.843	16.414	16.24	16.439	7
8	17.817	17.721	17.620	17.213	17.399	17.279	17.121	17.016	16.871	16.414	8
9	18.156	18.053	17'944	17.829	17.707	17.578	17.441	17'295	17'140	16.975	9
30	18.478	18.368	18.251	18.128	17'997	17.858	17.711	17.555	17'389	17'213	30
1	18.783	18.665	18.240	18.408	18.568	18.130	17.963	17.797	17.620	17'432	1
2	19'071	18.945	18.812	18.671	18.522	18.364	18.197	18.020	17.832	17.633	2
3	19'343	19.209	19.067	18.917	18.758	18.200	18.413	18.222	18.056	17.815	3
4	19.598	19.456	19.305	19.146	18.977	18.799	18.911	18.413	18.505	17.980	4
35	19.838	19.687	19.227	19.358	19,180	18.992	18.793	18.283	18.362	18.138	35
6	20.065	19.902	19.733	19.222	19°366	19.168	18.958	18.738	18.202	18.561	6
7	20'271	20'102	19.923	19.735	19.537	19.328	10,108	18.877	18.633	18.348	7
8	20'464	20.586	20.008	19,000	19.692	19'473	19.242	10,001	18.747	18'481	8
9	20'643	20,426	20.528	20.021	19.832	19.603	19,365	10,110	18.846	18.240	9
40	20.808	20,011	20.404		19.928	19.719	19.469	19.502	18.933	18.647	40
1	20.928	20.752	20'536	20.300	20.041	19.822	19.262	19,500	19.007	18.712	1
2	21.095	20.880	20.654		20.170	19,915	19.643	19'362	19.040	18.767	2
3 4	21,311	20'995	20'760	20.214	20'258	19.990	19'712	19'424	19'124	18.813	3 4
	21.331	21.098	20.853	20.299	20°334	20.028	19.772	19'475			_
45	21.430	21.188	20.936	20.673	20.399	20'115	19.822	19.218	19.204	18.880	45
6 7	21.218	21,392	21.002	20.736	20.452	20'164	19.863	19.223	19.233	18.904	6 7
8	21.202	21.337	21,151	20.835	20.200	20.536	19.897	19.603	19 250	18.936	8
9	21.720	21'447	21,162	20.873	20.572	20.263	19'945	19.620	192/3	18.946	9
	30	31	32	33	34	35	36	37	38	39	

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VALUES OF TEMPORARY ANNUITIES OF 1

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	Oura	40	41	42	43	44	45	46	47	48	49	Dura-
-	tion.	18.615	18.257	17.894	17.526	17.155	16.780	16:399	16.016	15.628	15.238	
1	0	.000	.000	.000	*000	.000	.000	*000	*000	.000	.000	0
ш	1	'967	.966	.966	.965	'965	.964	'964	'963	.962	.962	1
н	2	1.001	1.900	1.898	1.897	1.895	1.894	1.892	1.890	1.888	1.886	2
П	3	2.803	2.801	2'798	2.795	2.792	2.789	2'786	2'782	2.778	2.773	3
н	4	3.674	3.670	3.666	3.661	3.656	3.651	3.645	3.638	3.632	3.624	4
н												
п	5	4.214	4.208	4.203	4.495	4.487	4.479	4.470	4,461	4.451	4.439	5
н	6	5.35	5.316	5.307	5'297	5.584	5.276	5.263	5.250	5°235	5.550	8
н	7	6.106	6.094	6.082	6.069	6.022	6.040	6.023	6.006	5.986	5.965	7
н	8	6.828	6.843	6.838	6.811	6.493	6.443	6.752	6.729	6.404	6.677	8
п	9	7.285	7.264	7.544	7.23	7.200	7.476	7.449	7.420	7.388	7.354	9
ш	10	8.279	8.256	8.232	8.206	8.178	8.148	8.112	8.079	8.041	7.999	10
ш	1	8.948	8.921	8.892	8.860	8.826	8.790	8.751	8.708	8.661	8.611	1
н	2	9.590	9.558	9.24	9.486	9.446		9.356	9.306	9.251	9,191	2
н	3	10.500	10.199	10,158		10.038		9.932	9.873	9.809	9.740	3
	4	10.797	10.723	10.706		10.601	10.243	10.479	10,411	10.336	10.527	4
	15	11.365	11.311	11.528	11'200	11'137	11.040	10'997	10,010	10.834	10.743	15
	6	11,001	11.844	11.483	11.414	-	11.240	11.487	11,308	11,305	11,133	6
н	7	12,416	12.325	12.583		12,158	12'042	11.949	11.849	11.41	11.022	7
	8	12.002	12.832	12.758	12.674	12.284	12.488	12.384	12.521	15,121	12'022	8
	9	13'374	13'293	13.502	13.114	13'014	12.002	12.431	12.664	12.233	12.390	9
ш	20	13.817	13.728	13.632	13'529	13.418	13.300	13.172	13.034	12.887	12.730	20
ı	1	14.237	14.138	14.033	13,010	13.797		13.256		13.512	13.043	1
н	2	14.634	14.256	14,410			14.000	13.855	13.691	13.216	13,350	2
ш	3	15,000	14.890	14.763		14.481		14.120	13,081	13.792	13,290	3
1	4	12,361					14'326		14.544	14.045	13.826	4
П			15.531	12.093	14.945	14.787	14.619	14.439				
ш	25	15.691	12,221	15.401	15.541	15.040	14.889	14.695	14.488	14°269	14.038	25
1	6	12,000	15.848	15.684	15.214		15.132	14.927	14.707	14.473	14.527	6
н	7	16.584	16.154	15.950	15.762	15.268	15.300	15.138	14'903	14.655	14.394	7
1	8	16.223	16.379	16,193	15.995	15.482	15.263	15'327	15.048	14.816	14.241	. 8
н	9	16.800	16.613	16.412	16:204	15.081	15'745	15.496	15°233	14.957	14.668	9
н	30	17.026	16.827	16.617	16.393	16.157	15'908	15.645	15.369	15.080	14.778	30
н	1	17.234	17'022	16'799	16.263	16.314	16.025	15.777	15.488	15.186	14.872	1
н	2	17'422	17'199	16.964	16.712	16.453	16'179	15.891	15.289	15.526	14'950	2
п	3	17'593	17.328	17.110	16.849	16.222	16.589	12,080	15.676	12,321	15'015	3
ш	4	17.746			16.967					15'414		4
			17.499	17'240		16.681	16.383	16.072	15.749		15.068	
	35	17.883	17.624	17.354		16.773	16.464	16.145	15.809	15.462	12,111	35
1	6	18.004	17.734	17.453	17.128	16.820	16.232	16.501	15.859	15.206	15.142	6
	7	18.111	17.830	17.238	17.233		16.288	16.248	15.898	15.239	15.141	7
1	8	18.503	17.912	17.610	17.296	16.970	16.634	16.589	15.030	15.264	12.101	8
	9	18.583	17'982	17.671	17.348	17.014	16.671	16.314	15'954	15.283	15.506	9
	40	18.350	18.041	17.722		17'050	16.700	16.340	15.972	15.598	15'217	40
	1	18.407	18.000	17.763	17.425	17.078		16.328	15.986	15.608	15.554	1
	2	18.454	18.130	17.796			16.739	16'371	12,996	15.615	12,556	2
	3	18.493	18.165	17.822		17.116	16.752	16.381		12.650	12,533	3
	4	18.524	18.182	17.843	17.489	17.128	16.761	16.384	16.008	15'623	12.532	4
1	45	18.248	18.207	17.858	17.201	17.137	16.768	16.395	16,011	15.625	15.536	45
	6	18.567	18.222	17.869	17.210	17'144	16.772	16.392	16.013	15.627	15.537	6
	7	18.282	18.533	17.878	17.216	17.148	16.775	16.394	16.014	15.627	15.537	7
	8	18.592	18'241	17.883	17.20	17.121	16.777	16.398	16.012	15.628	15.538	8
	9	18.600	18.246	17.887	17.22	17.12	16.778	16.399	16.012	15.658	15.538	9
		40	AT	42	40		4 ==	16	420	40	16	
L		40	41	42	43	44	45	46	47	48	49	
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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	50	51	52	53	54	55	56	57	58	59	Dura-
tion.	14.844	14.447	14:049	13.648	13.245	12.842	12.438	12.033	11.629	11.226	tion.
0	,000	.000	.000	.000	.000	.000	,000	'000	.000	.000	0
1	. 961	*960	*959	.958	957	.956	954	'953	.951	*949	1
2	1.883	1.881	1.878	1.875	1.871	1.868	1.864	1.859	1.824	1.849	2
3 4	2.768	2,763	2.757	2.751	2.744	2.736	2.728	2.719	2'710	2.699	3 4
5	3.616	3.607	3.298	3°587 4°384	3.575	3.248	3.220	3.535	3.219	3.201	
6	4°427 5°202	5.184	4°400	5'141	4.366	4°348	4°327 5°063	4°3°5 5°032	4.281	4.255	5
7	5.942	5.917	2.890	5.861	5.828	5.794	5.756	5.715	5.671	5.623	7
8	6.647	6.615	6.580	6.242	6.201	6.457	6.409	6.356	6.300	6.239	8
9	7.317	7.277	7.234	7.184	7.132	7.080	7.020	6.955	6.882	6.810	9
10	7.954	7.905	7.852	7.794	7.731	7.664	7.592	7.213	7.429	7.338	10
1	8.222	8.498	8.435	8:365	8.291	8.510	8.124	8.031	7.930	7.823	1
3	9'127	9.057	8.983	8.901	8.813	8.719	8.618	8.209	8:392	8.267	2
4	9.664	9.583	9.496	9.868	9.300	9.627	9° 07 4	8.949	8.814	8.671	3 4
15	10.644	10.238	9'977	10,301	10.160	10'028	9 494	9.351	9,199	9.365	15
8	11.084	10,967	10.839	10.701	10.223	10.392	10.558	10'049	9.859	9.658	6
7	11.200	11.366	11.553	11,060	10,004	10,439	10.244	10.346	10,138	9.018	7
8	11.883	11.734	11.575	11.405	11.524	11.031	10.828	10.612	10.384	10.142	8
9	12.536	12.072	11.898	11.411	11.213	11.303	11,081	10.847	10.601	10'343	9
20	12.262	12°382	12,105	11.088	11.773	11.245	11,309	11.023	10.789	10.214	20
1	12.859	12.664	12.457	12.534	12'004	11.760	11.203	11.533	10.021	10.629	1
2	13.130	12.010	12.696	12.459	12'210	11.948	11.674	11.387	11.089	10.780	2
3 4	13'375	13.148	12'909	12.656	12.390	12'111	11.821	11.219	11.502	10.881	3 4
25	13.295	13.323	13.008		12.246	12.52	11.947	11.629	11,301	10'964	25
6	13.792	13.534	13.407	13'108	12.796	12'372	12.025	11.721	11.380	11.083	6
7	14'119	13.831	13'531	13'217	12.892	12.226	15,511	11.826	11.493	11'124	7
8	14'251	13.950	13.636	13.310	12'972	12.624	12'268	11.003	11.231	11.124	8
9	14.365	14.021	13.725	13.386	13'037	12.679	12'314	11.940	11.261	11.177	9
30	14.463	14.136	13.798	13.449	13.000	12.723	12.349	11.068	11.283	11'194	30
1	14.244	14°206	13.828	13°499	13,131	12.756	12.375	11.089	11.208	11,502	1
2	14.612	14.564	13.006	13.239	13.163	12.782	12'395	12.004	11,600	11.513	2
3 4	14.667	14.310	13.944	13.220	13,188	12.801	12'410	12.014	11.617	11,510	3 4
35	14.712	14.347	13.974	13.200	13,500	12.814	12'420	12.051	11.622	11.224	35
6	14.747	14.375	13.996	13.623	13.518	12.831	12.431	12.050	11.627	11'225	6
7	14'795	14'413	14.025	13.632	13'234	12.835	12'434	12.031	11.628	11,550	7:
8	14.810	14.424	14'034	13.638	13.538	12.838	12.436	12'032	11.629	11.556	8
9	14.821	14.432	14.039	13.642	13.541	12.839	12.437	12.033	11.629	11.559	9
40	14.829	14.438	14.043	13.644	13.243	12.840	12'437	12.033	11.629	11.556	40
1	14.835	14'441				12.841			11.629		1
2	14.838	14.444		13.647				12.033	11.629	11.556	3
$\begin{vmatrix} 3 \\ 4 \end{vmatrix}$	14.840			13.647		12.841	12.438	12.033	11.629	11,550	0
45	_	14.446		13.647		12.841	12.438	12.033	11.629	59	
6		14 440	14'049	13.648		12.842	12.438	12'033	- 58	50	
7	14.843	14.447		13.648		12.842	-2 430		51	14.844	
8	14.843	14'447	14.049	13.648				52	14.447		-
9	14.843	14.447	14.049	13.648				14.049		14.844	52
								14'049	14'447	14.844	50
-											
	50	51	52	53	54	55	56	52	51	50	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	60	61	62	63	64	65	66	67	68	69	Dura-
tion	10.825	10.425	10.028	9.635	9.245	8.859	8.478	8.103	7.733	7.370	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	*947	945	'943	*940	. 938	'935	.031	928	924	920	1
2	1.843	1.837	1,830	1,855	1.814	1.802	1,496	1.482	1.774	1.461	2
3	2.688	2.675	5.661	2.647	2.630	2.613	2.294	2'573	2,221	2.224	3 4
4	3,482	3,461	3,439	3.414	3'388	3.359	3.358	3.592	3.259	3.842	5
5	4.554	4.196	4.163	4°127	4.088	4.045	4.000	3,021	3.899 4.474	4.398	6
6 7	4.923	4.880	4.834	4.785	4°731 5°320	4.673 5.245	5.162	4°545 5°079	4.987	4.889	7
8	5°571	6.103	5°455 6°025	5°39° 5°944	5.856	5.762	5.665	5.222	5°441	5'321	8
9	6.729	6.641	6.248	6.448	6.341	6.226	6.102	5.976	5.840	5.696	9
10	7.240	7'135	7.023	6.904	6.776	6.641	6.498	6.346	6.186	6.019	10
1	7.708	7.584	7.453	7.313	7.162	7.008	6.842	6.668	6.485	6.294	1
2	8.133	7.990	7.839	7.679	7.209	7:330	7.142	6.944	6.739	6.24	2
3	8.218	8.356	8.184	8.002	7.811	7.610	7'399	7.180	6.952	6.419	3
4	8.864	8.681	8.489	8.586	8.073	7.850	7.619	7.378	7.129	6.872	4
15	9'173	8.970	8.757	8.233	8.299	8.022	7.803	7.542	7.273	6.998	15
6	9.446	9.223	8.989	8.746	8.491	8.228	7.956	7.676	7.390	7.098	6
7	9.686	9'443	9,190	8.927	8.653	8.371	8.081	7.784	7.482	7.175	7
8	9.892	9.632	9.360	9.079	8.787	8.487	8.181	7.869	7.553	7'233	8
9	10.04	9'794	9.203	9.202	8.896	8.281	8.561	7.935	7.607	7.277	9
20	10.554	9.929	9.622	9.308	8.982	8.655	8.322	7.985	7.647	7:308	20
1	10,322	10.041	9.719	9,390	9'054	8.413	8.369	8.023	7.676	7.330	1 2
2	10,461	10,133	9'798	9.456	9,108	8.757	8.404	8.049 8.068	7.696	7°345 7°355	3
3	10.248	10'207	9.859	9.207	9'149	8.789	8.429	8.081	7.710	7.361	4
4	10.018	10.562	9.907	9.245	9'179	8.812	8°446			7.365	25
25	10.674	10,311	9'943	9.574	9,501	8.829	8.458	8°090	7.725	7.367	6
6 7	10.716	10'345	9.970	9.594	9'217	8.840 8.847	8.466 8.471	8.099	7.731	7.369	7
8	10.749	10.389	9,990	9.609	9°227 9°234	8.852	8.474	8.100	7.732	7.369	8
9	10.790	10,402	10,013	9.625	9:239	8.855	8.476	8.103	7.733	7.370	9
30	10.803	10'410	10,019	9.629	9.241	8.857	8.477	8.103	7.733	7:370	30
1	10,811	10,416	10.013	9.632	9°243	8.858	8.478	8,105	7.733	7'370	1
2	10.817	10'420	10.022	9.633	9.244	8.858	8.478	8.103	7.733	7.370	2
3	10.850	10'422	10'027	9.634	9.244	8.858	8.478	8.103	7.733	7.370	3
4	10.855	10'424	10.027	9.635	9.244	8.859	8.478	8.103	7.733	69	
35	10.824	10'424	10.038	9.635	9'245	8.859	8.478	8.103	68	40	
6	10.824	10.425	10.058	9.635	9'245	8.859	8.478	67	41	40	
7	10.822	10,452	10.038	9.635	9°245	8.859	66	42		18.615	
8	10.822	10.422	10.038	9.635	9°245	65	43		18:257	18.615	62
9	10.822	10,422	10.058	9.635	64	44	43	17.894	18.257	18.615	1
40	10.825	10.425	10'028	63	45		17.526	17.894	18.257	18.612	60
1 2	10.822	10.425	62	46		17.155	17.526	17.894	18.257	18.615	59
4	10.825	61	47		16.780	17.122	17.526		18.257	18.612	8
	60	48		16.399	16.780	17.155	17.26	17.894	18.257	18.612	7
	49		16.016	16.399	16.480	17'155	17.526	17.894	18.256	18.615	6
		15.628	16.016	16.399	16.480		17.526	17.894	18.526	18.615	5
1	15.238	15.628	16.012	16.399	16.480	17.122	17.526	17.894	18.256	18.614	54
53	15.538	15.628	16.012	16.399	16.779	17.122	17.526		18.255	18.613	3 2
2	15.538	15.628		16.399	16.779	17.155	17.526	17.893	18.254	18.612	1
1 50	15.538	15.628	16.012	16:399	16.779	17.154	17.525	17.892	18.522	18.605	50
	15.538	15.628		16.399	16.779	17'154	17.524				-
	49	48	47	46	45	44	43	42	41	40	

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VALUES OF TEMPORARY ANNUITIES OF 1

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Dura-	70	71	72	73	74	75	76	77	78	79	Dura-
tion.	7.014	6.665	6.324	5.991	5.667	5.352	5.045	4.749	4.462	4.185	tion.
0	.000	.000	.000	.000	.000	.000	.000	,000	.000	.000	0
1	'915	.010	*905	.899	.892	*885	.878	.869	.861	.851	1
2	1.748	1.733	1'717	1.700	1.685	1,665	1.641	1.918	1,203	1.266	2
3	2,201	2°473	2'443	2,410	2'375	2*338	2.297	2°254	2.508	2.120	3
4	3.178	3,133	3,082	3,033	2.978	2,010	2.856	2.789	2.419	2.644	4
5	3.485	3.414	3.648	3.575	3.496	3°414	3.326	3'233	3,139	3.034	5
6 7	4.316	4.530	4.138	4.041	3.938	3.829	3.715	3.296	3.471	3.342	6
8	4.786	4.676	4.260	4°437	4°616	4.174	4.033	3.887 4.118	3.736	3.280 3.261	7 8
9	5.194	5°059 5°386	4°918 5°220	4°77° 5°047	4°868	4°456 4°682	4°289 4°492	4.296	3.941	3.896	9
10	5.843	5.660	5'470	5°273	5'070	4.861	4.648	4°432	4.513	3.993	10
1	6.094	5.888	5.674	5°454	5°229	5.000	4.767	4.532	4 213	3 993	1
2	6.303	6.074	5.839	5.298	5'353	5.102	4.855	4.605	4.355	4.108	2
3	6.473	6.553	5.968	5.409	5.447	5.183	4,010	4.656	4'395	4.139	3
4	6.610	6.341	6.069	5.794	5.217	5.540	4.964	4.691	4.422	4.128	4
15	6.718	6.433	6.142	5.856	5.267	5.580	4.995	4.714	4.439	4.170	15
6	6.802	6.205	6.505	2,001	5.603	5'307	5.012	4.729	4'449	4.177	6
7	6.865	6.224	6.243	5'933	5.627	5'325	5.028	4.738	4°455	4.181	7
8	6.912	6.291	6.272	5.955	5.643	5°336	5.036	4.743	4.459	4.183	8
9	6.946	6.617	6.501	5'969	5.653	5°343	5.040	4.746	4.460	4.184	9
20	6.970	6.635	6.304	5'978	5.659	5'347	5'043	4.747	4.461	4.185	20
1	6.987	6.647	6.313	5.984	5.663	5'349	5.044	4.748	4.462	4.182	1
2	6.997	6.655	6.318	5'987	5.665	5.320	5°045	4.749	4.462	4.182	2
3	7.004	6.659	6.331	5'989	5.666	5°351	5.045	4.749	4.462	4.182	3
4	7.009	6.665	6.355	5.990	5.666	5°351	5°045	4.749	4.462	79	
25	7.011	6.663	6.333	5,001	5.667	5'352	5.045	4.749	78		
6	7.012	6.664	6.324	5,001	5.667	5'352	5.045	77		30	
7	7.013	6.662	6.324	2,991	5.667	5°352	76		31	21.962	
8	7.014	6.665	6.324	2,001	5.667	75		32	21.646	21.962	72
9	7'014	6.665	6.324	2,001	74		33	21.325	21.646	21'962	1
30	7.014	6.662	6.324	73	25	34	21.001	21.322	21.646	21.962	70
1	7.014	6.665	72	36	35	20.673	21'001	21,322	21.646	51,065	69
2	7.014	71	37		20.340	20.673	21'001	21 325	21.646	21,065	8
	70	38		20.004	20.340	20.673	21,001	21.352	21.646	21.965	7
	39		19.663	20'004	20.340	20.673	21'001	21.325	21.646	21.962	6
		19.319	19.663	20'004	20.340	20.673	21'001	21.322	21.646	21.961	5
	18.969	19.319	19.663	20'004	20'340	20.673	21'001	21,322	21.645	21.961	64
63	18.969	19.319	19.663	20'004	20.340	20.673	21'001	21.325	21.645	21.960	3
2	18.969	19.319	19.663		20'340	20.673	21'001	21.324	21.644	21.959	2
1	18.969	19.319	19'663		20'340	20.672	21'000	21.324	21.643	21.957	1
60	18.969	19,319			20.340	20.672	20,000	21°323	21.641		60
59	18.969	19,319	19.663			20.671	20.998	21,351	21.638		59
8	18.969	19,319	19.663	20.003	20.338	20.670	20,996	21,318	21.634	21.945	8
7	18.068	19'318	19.663	t .	20'337	20'668	20,003	21.314	21.629	21'937	7
6 5	18.068	19'317	19'662	20'001	20,332	20.665	20.089	21,308	21'621	21'927	6 5
	18.968	19.316	19.660	19,999	20,335	20.660	20.983	21'299	21.610	21.013	
54	18.967	19,312	19'658		20.327	20.654	20'974	21.588	21.206	21.873	54 3
2	18.963	19,313	19.655	19'991	20.371	20.645	20.048	21'274	21.24	21.845	2
1	18.959	19.304	19.650	19.904	20,315	20.033	20.948	21,531	21.224	21.811	1
50	18.954	19 304	19.633	19,975	20,300	20°598	20,004	21,501	21,400	21.769	50
	39	38	37	36	35	34	33	32	31	30	

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VALUES OF TEMPORARY ANNUITIES OF 1

21 PER

Dura-	80	81	82	83	84	85	86	87	88	89	Dura-
tion.	3.918	3.662	3.416	3.180	2.954	2.739	2.534	2:340	2.155	1.981	tion.
0	.000	.000	.000	.000	.000	000°	.000	.000	,000	,000	0
1	.841	.829	'817	.804	'790	.775	.759	.741	.723	.704	1
2	1.238	1.207	1'474	1'440	1'402	1,363	1.322	1.278	1.232	1.184	2
3	2.102	2.052	1.994	1'932	1.864	1'799	1.728	1.655	1.249	1,201	3
4	2.265	2°482	2.396	2*306	2.515	2'114	2.012	1'912	1.808	1.403	4
5	2.927	2.816	2.401	2.283	2,461	2.336	2'210	2.085	1.954	1.826	5
6	3.508	3.069	2.058	2.483	2.636	2.488	2*339	2,130	2.044	1.899	6
7	3.420	3.527	3,001	2.924	2.755	2.288	2'421	2.257	2.096	1,040	7
8	3.248	3,333	3.506	3.050	2.832	2.621	2.472	2.596	2,150	1,961	8
9	3.692	3:488	3.582	3.084	2.882	2.690	2,201	2.314	2'141	1'972	9
10	3.773	3.554	3°337	3.154	2,019	2.413	2.218	2.350	2'149	1.977	10
1	3.827	3.257	3°370	3.149	2.934	2.726	2.256	2.332	2.123	1.080	1
2	3.864	3.624	3,390	3,193	2.944	2.433	2,231	2.338	2.124	1,081	2
3	3.887	3.641	3,405	3.171	2.949	2.436	2,233	2,339	2,122	1,081	3
4	3,001	3.621	3.409	3.176	2,925	2.438	2.234	2.339	2.122	89	
15	3,000	3.656	3,415	3.148	2.923	2.739	2.534	2'340	88	- 20	
6	3.014	3.659	3°414	3.179	2.954	2.739	2.534	87	27	20	
7	3,019	3.661	3,412	3.179	2.954	2.739	86	22	21	24.901	
8 9	3.012	3.661	3,412	3.180	2.924	85		22	24.627	24'901	82
	3.018	3.665	3.416	3,180	84		23	24.348	24.627		1
20	3.018	3.665	3°416	83	25	24	24.065	24.348	24.627	24'901	80
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	3,018	3.665	82	26	25	23.777	24.062	24'348	24.627	24'900	79
2	3.918	81	27		23.484	22.777	24.065	24 348	24.627		8
	80	28		23.188	23.484	23.777 23.777	24.065		24.627	24'900	7
	20	20	22.888	23'188	23.484	23.777	24.065		24.627	24'900	6
	29	22.583	22.888	23.188	23.484	23.777	24.065	24.348	24.627	24'900	5
	22.275	22.283	22.888	53,188	23.484	23.777	24.065	_	24.627	24'900	74
73	22.275	22.283	22.888	23.188	23'484	23.777	24.065	24.348	24.627	24'900	3
2	22.275	22.283	22.888	53,188	23.484	23.777	24.065	24.348		24 900	2
lī	22'274	22.283	22.888	23.188	23.484	23.777	24.064		24.625	24.897	1
70	22.274	22.283	22'887	23,188	23.484	23.776	24.064	24'346	24.624	24.895	70
69	22.274	22.283	22.887	23.188	23.484	23.776	24.063	24'345	24.622	24.892	69
8	22.274	22.283	22.887	23,188	23.483	23.775	24.062		24.619	24.888	8
7	22.274	22.283	22.887	23.184	23.482	23.773	24.02	24'340	24.615	24.882	7
6	22°274	22.283	22.886	23.186	23.481	23.771	24.026	24'335	24.609	24.875	6
5	22.273	22.282	22.885	23.184	23.479	23.768	24.022	24.329	24.601	24.864	5
64	22.273	22.281	22.883	23,185	23.475	23.763	24.045	24.321	24°590	24.851	64
3	22.272	22.579	22.881	23.148	23.470	23.757	24°037	24.310	24.576	24'834	3
2	22.270	22.27	22.877	23.143	23.464	23.748	24.036	24,310	24°559	24.814	2
1	22.267	22.243	22.872	23.164	23.455	23.736	24'011	24.548	24.238	24.788	1
60		22.268		23.124	23.443		23.993				60
59	22.258	22.260	22.856	23'145	23.427	23.703	23.970	24.229	24.480	24'721	59
8	22.50	22.221	22.843	23'129		23.679		24.197	24'442	24.678	8
7	22°240	22.238	22.827	23,100			23.909				7
6	22.227	22.21	22.806	23.082	23.354	23.616	23.869	24'112	24°346	24.570	6
5	22'210	22.200	22.781	23.024	23'319	23.575	23.822	24.059	24.287	24.202	5
54	22°188	22.473	22.749	23.018	23.277	23.527	23.768	23.998	24.220	24.431	54
3	22,191	22,441	22.412	22.974		23'471	23.705	23'929	24.144	24'348	3
2	22'127	22.402	22.667	22.923	23.169	23'406	23.633	23.851	24.028	24.256	2
1	22.087	22.326	22.614	22.863	23.103	23.333	23.553	23.763	23.063	24°154	1
50	22'040	22'302	22.223	22.795	23.027	23°250	23°462	23.665	23.828	24.041	50
	29	28	27	26	25	24	23	22	21	20	

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VALUES OF TEMPORARY ANNUITIES OF 1

21 PER

Dura-	90	91	92	93	94	95	96	97	98	99	Dura-
tion.	1.816	1.661	1.514	1.379	1.248	1.133	1.018	•925	.833	·708	
0	.000	.000	.000	.000	.000	.000	,000	.000	.000	.000	0
1	'682	.661	.636	.613	.585	.261	529	.202	.488	'455	1
2	1.133	1.081	1'027	973	'914	.858	.796	751	710	.646	2
3	1'420	1,339	1.255	1.174	1,088	1,008	.926	.863	.803	.708	3
4	1.296	1,490	1,383	1.581	1.172	1,081	.985	.010	.833	99	
5	1.699	1.275	1.451	1.334	1,518	1'114	1,010	925	98	10	
6	1.757	1.620	1.482	1,361	1.538	1'128	1,018	97	II		
7	1.787	1'642	1.202	1.373	1.546	1,133	96	12		27.354	
8 9	1.803	1.628	1.211	1.378	1.248	95	13		27.133	27'354	92
			1.213	93	94	14		26.906	27.133	27.354	1
10	1.814	1.661	1.214	===	15		26.675	26.906	27'132	27'354	90
2	1.816		92	16		26.437	26.675	26.906	27'132	27.354	89
2		91	17		26.194	26.437	26.674	26.906	27'132	27.354	8
	90	18		25.947	26.194	26.437	26.674	26.906		27.353	7
	19		25.692	25'947	26'194	26.437	26.674	26.906	27'132	27.353	8
		25.434	25.692	25.946	26.194	26.437	26.674	26.906		27.353	5
	25.170	25'434	25.692	25.946	26.194	26.437	26'674	26.906	27.132	27.353	84
83	25.170	25°434	25.692		26'194	26'437	26.674			27.353	3
2	25.140	25.434	25.692		26'194	26.437	26.674	26.902	, ,	27.352	2
1	25.140	25.434	25.692		26'194	26.436	26.674	26.902	27.131	27.351	1
80	25.140	25'434	22.692		26.194	26.436	26.673	26.904		27.350	80
79	25.140	25'434	25.692	- 1	26'193	26.436	26.673	26.903		27.347	79
8					26.193	26.435	26.672	26.002		27'344	8
7	25.170	25.434	25.692		26,135	26.434	26.670		27.153	27.340	7
6	25.170	25.434	25.692		26,131	26,432	26.668	26.896	27.118	27.334	6
5	25'170	25.433	25.692	25'944	26.180	26.430	26.664	26.891	27.115	27.326	5
	25.169	25.433	25.691		26.184	26.426	26.659	26.885	27.104	27.316	74
74	25.168	25.432	25.690	25.941	26.183	26'421	26.653	26.877	27.094	27.304	3
3 2	25.168	25'431	25.688			26.412	26.645	26.866	27.081	27.288	2
li	25.162	25.429	25.685		26.171	26.406	26.634		27.065	27.269	ī
70	52,165	25.426	25.681	25.930	26.163	26.392	26.620	26.836	27.045	27.246	70
		25.422	25.676				26.603			27.518	69
69	25.128	25.417	25.669		26.121		26.282		26.021	27.186	8
8 7	25.125	25.409	25.659	25.902	26.118	26.342		26.762	26.960	27.148	7
	25.145	25.400	25.647	25.887	26.096	26,316	26.557		26'921		6
6 5	25,132	25.384	25.632	1 0 0	26.040	26.582	26.492		26.876	27.102	5
	25.155	25.371	25.613			26.549	26,421		26.826		64
84	25.106	25.352	25.289	25.818	26'038		-		1	26.037	3
3 2	25.082	25.327	25.261	25.786	25'957	26.207			26'704	26.867	2
1	25.060	25.298		25'747	, , , , ,	26.103	26.589		26.633	26.791	1
60	25'031	25.264		25.403	25.821	26.040			26.223		
	24.995	25.223	25'442	25.651							
59	24.953	25.176		25.593	25.786		26.146			26.213	59
8	24.005	25.155		25.27	25.715		26.062			26.213	8 7
7 6	24.849			25.453	25.634		25.870			26.402	8
5	24.785									26.165	5
	24.713	24.912		25.279	25'449						1
54	24.633	24.825								26.027	54 3
3	24.243									25.884	2
2	24'444	24.622		24.951	25.105					25.731	1
50	24.332	24.207			24.822				-		50
- 50	24.510		24.537	24.684	-						- 50
	19	18	17	16	15	14	13	12	II	10	

$\mathbf{0}^{\mathtt{M}}$

 $2\frac{3}{4}$ per cent.

CONSTANTS.

Constant.	Number.	Logarithm.
$i \ (1+i) \ (1+i)^{\frac{1}{2}} \ (1+i)^{\frac{1}{4}} \ v \ v^{\frac{1}{2}}$	°027 5 1°027 5 1°013 656 7 1°006 805 2 °973 236 0 °986 527 3	2.439 332 7 0.011 781 8 0.005 890 9 0.002 945 5 7.988 218 2 7.994 109 1
υ [‡] d δ	990 527 3 993 240 8 926 764 0 927 128 7	1 994 109 1 1 997 054 5 2 427 550 9 2 433 428 5

WHOLE-LIFE PARTICIPATING ASSURANCES

 0^{M}

MALE LIVES COMMUTATION TABLE

 $2^{\frac{3}{4}}$ PER CENT

x	D_x	\mathbb{N}_x	S_x	C_x	M_x	R_x	x
10	76 239	2 055 051	44 044 188	250.80	21 238'57	876 252.65	10
11	73 949	1 978 812	41 989 137	245.53	20 987'77	855 014.08	11
12	71 724	1 904 863	40 010 325	241.06	20 742'24	834 026.31	12
13	69 563	1 833 139	38 105 462	236.66	20 501'18	813 284.07	13
14	67 465	1 763 576	36 272 323	232.33	20 264'52	792 782.89	14
15	65 427	1 696 111	34 508 747	229°35	20 032'19	772 518·37	15
16	63 446	1 630 684	32 812 636	226°36	19 802'84	752 486·18	16
17	61 522	1 567 238	31 181 952	224°60	19 576'48	732 683·34	17
18	59 651	1 505 716	29 614 714	222°17	19 351'88	713 106·86	18
19	57 832	1 446 065	28 108 998	220°88	19 129'71	693 754·98	19
20	56 063	1 388 233	26 662 933	220°62	18 908.83	674 625'27	20
21	54 343	1 332 170	25 274 700	220°22	18 688.21	655 716'44	21
22	52 667	1 277 827	23 942 530	220°76	18 467.99	637 028'23	22
23	51 037	1 225 160	22 664 703	221°63	18 247.23	618 560'24	23
24	49 449	1 174 123	21 439 543	222°80	18 025.60	600 313'01	24
25	47 904	1 124 674	20 265 420	224°25	17 802.80	582 287.41	25
26	46 397	1 076 770	19 140 746	225°94	17 578.55	564 484.61	26
27	44 929	1 030 373	18 063 976	228°78	17 352.61	546 906.06	27
28	43 498	985 444	17 033 603	230°40	17 123.83	529 553.45	28
29	42 104	941 946	16 048 159	233°09	16 893.43	512 429.62	29
30	40 744	899 842	15 106 213	235°91	16 660°34	495 536'19	30
31	39 418	859 098	14 206 371	237°99	16 424°43	478 875'85	31
32	38 124	819 680	13 347 273	240°61	16 186°44	462 451'42	32
33	36 863	781 556	12 527 593	242°92	15 945°83	446 264'98	33
34	35 634	744 693	11 746 037	244°93	15 702°91	430 319'15	34
35	34 435	709 059	11 001 344	247.41	15 457°98	414 616·24	35
36	33 266	674 624	10 292 285	249.59	15 210°57	399 158·26	36
37	32 126	641 358	9 617 661	251.47	14 960°98	383 947·69	37
38	31 015	609 232	8 976 303	253.07	14 709°51	368 986·71	38
39	29 932	578 217	8 367 071	255.42	14 456°44	354 277°20	39
40	28 876	548 285	7 788 854	257°13	14 201°02	339 820.76	40
41	27 845	519 409	7 240 569	259°21	13 943°89	325 619.74	41
42	26 841	491 564	6 721 160	261°61	13 684°68	311 675.85	42
43	25 861	464 723	6 229 596	263°71	13 423°07	297 991.17	43
44	24 905	438 862	5 764 873	266°39	13 159°36	284 568.10	44
45	23 972	413 957	5 326 011	269°02	12 892'97	271 408.74	45
46	23 062	389 985	4 912 054	272°15	12 623'95	258 515.77	46
47	22 172	366 923	4 522 069	275°47	12 351'80	245 891.82	47
48	21 303	344 751	4 155 146	278°95	12 076'33	233 540.02	48
49	20 454	323 448	3 810 395	283°08	11 797'38	221 463.69	49
50 51 52 53 54	19 624 18 811 18 016 17 237 16 474	283 370 264 559 246 543 229 306	3 486 947 3 183 953 2 900 583 2 636 024 2 389 481	287·28 292·04 296·80 301·80 3°7·45	11 514'30 11 227'02 10 934'98 10 638'18 10 336'38	209 666'31 198 152'01 186 924'99 175 990'01 165 351'83	50 51 52 53 54

OM

COMMUTATION TABLE

 $2^{\frac{3}{4}}$ PER CENT.

x	D_x	\mathbb{N}_x	\mathbb{S}_x	C_x	\mathbf{M}_x	R_x	x
55	15 725	212 832.	2 160 175.	313.00	10 028 93	155 015.45	55
56	14 991'	197 107	1 947 343	318'69	9 715 93	144 986'52	56
57	14 272	182 116.	1 750 236.	324.68	9 397 24	135 270.59	57
58	13 565	167 844.	1 568 120.	330'71	9 072.56	125 873 35	58
59	12871	154 279	1 400 276.	336.79	8 741.85	116 800.40	59
60	12 190'	141 408.	1 245 997	342'49	8 405.06	108 058 94	-60
61	11 521.	150 518.	1 104 589.	348.50	8 062.57	99 653.88	61
62	10 865.	117 697	975 371.	353'55	7 714'37	91 591,31	62
63	10 220'	106 832.	857 674	358.36	7 360.82	83 876.94	63
64	9 588°2	96 612.0	750 841.9	362.65	7 002.46	76 516 12	64
			_			69 513.66	
65	8 968.9	87 023.8	654 229.9	366.29	6 639.81	62 873.85	65
66	8 362.6	78 054.9	567 206'1	368.84	6 273.52	56 600.33	66
67	7 770.0	69 692°3	489 151.2	370'50	5 904.68	0 00	68
68	7 191'5	61 922'3	419 458.9	370.89	5 534.18	50 695.65	69
69	6 628'1	54 730.8	357 536.6	369.95	5 163.59	45 161.47	_
70	6 080.8	48 102.7	302 805.8	367.33	4 793 34	39 998.18	70
71	5 550.7	42 021 9	254 703'1	363.18	4 426.01	35 204.84	71
72	5 038.9	36 471.2	212 681.3	357.04	4 062 83	30 778.83	72
73	4 547°1	31 432°3	176 210.0	349°24	3 705.79	26 716.00	73
74	4 076'1	26 885.5	144 777'7	339,10	3 356.22	23 010,51	74
75	3 627'9	22 809'1	117 892.5	327.10	3 017.45	19 653.66	75
76	3 203.7	19 181.5	95 083.4	313.12	2 690.35	16 636.21	76
77	2 804'9	15.977.5	75 902.2	297.05	2 377.20	13 945.86	77
78	2 432.7	13 172.6	59 924.7	279.25	2 080.12	11 568 66	78
79	2 088'3	10 739'9	46 752'1	259.79	1 800,00	9 488 51	79
80	1 772.7	8 651.6	36 012.5	238.84	1 541'11	7 687.61	80
81	1 486°4	6 878.9	27 360.6	216.99	1 302'27	6 146.20	81
82	1 229.6	5 392.5	20 481'7	194.32	1 082.58	4 844'23	82
83	1 002'4	3 39 ² 3 4 162°9	15 089.5	171'43	890.93	3 758.95	83
84	. 804,10	3 160.47	10 926.33	148.80	719.20	2 868.02	84
							85
85	633.77	2 356.37	7 765.86	126.87	570.70	2 148 52	86
86	489.94	1 722'60	5 409 49	105.92	443.83	1 577.82	87
87	370.90	1 232 66	3 686.89	86.638	337'914	1 133,005	88
88	274.34	861.76	2 454.23	69,119	251.276	796°078 544°802	89
89	197.88	587.42	1 592.47	53.693	182°157		
90	138.89	389.54	1 005.02	40.653	128.464	362.645	90
91	94.219	250.651	615.213	29.674	87.811	234.181	91
92	62.312	156'132	364.862	21.008	58.137	146'370	92
93	39.249	93.817	208.730	14'288	37.039	88.233	93
94	24°203	54°268	114.913	9.422 1	22.750 7	51,193 6	94
95	14.133	30.062	60.645	5.842 1	13.328 6	28.442 9	
96	7.9128	15.932 1			7.486 5	15°1143	
97	4'174 4				3.959 9		
98	2'101 4	3 .844 9	6.628 6		1,998 6		
99	1'022 6	1.743 5	2.483 4	.230 8			
100	•464 4	.720 9	1.040 2		°445 2	693 3	100
101	1937	°256 5	3193	1257	.186 9	'248 1	
102	0628	.062 8	.062 8		.061 5	.061 5	102
				1			

 0^{M} LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x $2\frac{3}{4}$ per cent.

_						,	$\forall x, \ \bigcirc x, \ 1$		CENT
x	$\log D_x$	$\log \mathbb{N}_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_{x}$	$col N_x$	eol C _x	$\operatorname{col} \mathrm{M}_x$	x
10	4.882 18	6·312 82	2'399 32	4'327 12	5.117 82	7·687.18	3.600 68	5.672 88	10
11	.868 93	·296 40	'390 10	'321 97	.131 07	·703 60	.609 90	.678 03	11
12	.855 66	·279 86	'382 13	'316 85	.144 34	·720 14	.617 87	.683 15	12
13	.842 38	·263 19	'374 13	'311 78	.157 62	·736 81	.625 87	.688 22	13
14	.829 08	·246 39	'366 10	'306 74	.170 92	·753 61	.633 90	.693 26	14
15	·815 76	'229 45	360 49	'301 73	'184 24	'770 55	639 51	698 27	15
16	·802 41	'212 37	354 80	'296 73	'197 59	'787 63	645 20	703 27	16
17	·789 03	'195 13	351 41	'291 73	'210 97	'804 87	648 59	708 27	17
18	·775 62	'177 74	346 69	'286 73	'224 38	'822 26	653 31	713 27	18
19	·762 17	'160 19	344 15	'281 71	'237 83	'839 81	655 85	718 29	19
20	'748 68	142 46	343 65	·276 67	251 32	·857 54	656 35	723 33	20
21	'735 14	124 56	342 86	·271 57	264 86	·875 44	657 14	728 43	21
22	'721 54	106 47	343 92	·266 42	278 46	·893 53	656 08	733 58	22
23	'707 89	088 19	345 63	·261 20	292 11	·911 81	654 37	738 80	23
24	'694 16	069 71	347 92	·255 89	305 84	·930 29	652 08	744 11	24
25	680 37	°051 03	35° 73	250 49	375 68	.948 97	649 27	749 51	25
26	666 49	°032 12	353 99	244 98		.967 88	646 01	755 02	26
27	652 53	°012 99	359 42	239 36		.987 01	640 58	760 64	27
28	638 47	5°993 63	362 48	233 60		6.006 37	637 52	766 40	28
29	624 32	°974 03	367 53	227 72		.025 97	632 47	772 28	29
30	'610 06	'954 17	372 75	°221 68	389 94	°045 83	627 25	778 32	30
31	'595 69	'934 04	376 56	°215 49	404 31	°065 96	623 44	784 51	31
32	'581 20	'913 64	381 31	°209 15	418 80	°086 36	618 69	790 85	32
33	'566 59	'892 96	385 46	°202 64	433 41	°107 04	614 54	797 36	33
34	'551 86	'871 98	389 04	°195 98	448 14	°128 02	610 96	804 02	34
35	'537 00	·850 68	393 42	189 15	'463 00	149 32	606 58	·810 85	35
36	'522 00	·829 06	397 22	182 15	'478 00	170 94	602 78	·817 85	36
37	'506 86	·807 10	400 48	174 96	'493 14	192 90	599 52	·825 04	37
38	'491 57	·784 78	403 24	167 60	'508 43	215 22	596 76	·832 40	38
39	'476 13	·762 09	407 25	160 06	'523 87	237 91	592 75	·839 94	39
40	'460 53	739 01	'410 15	152 32	'539 47	260 99	589 85	·847 68	40
41	'444 75	715 51	'413 65	144 38	'555 25	284 49	586 35	·855 62	41
42	'428 80	691 58	'417 66	136 23	'571 20	308 42	582 34	·863 77	42
43	'412 64	667 19	'421 12	127 85	'587 36	332 81	578 88	·872 15	43
44	'396 29	642 33	'425 51	119 23	'603 71	357 67	574 49	·880 77	44
45	379 71	.616 96	'429 78	'110 35	620 29	'383 04	'570 22	'889 65	45
46	362 89	.591 05	'434 81	'101 20	637 11	'408 95	'565 19	'898 80	46
47	345 81	.564 57	'440 08	'091 73	654 19	'435 43	'559 92	'908 27	47
48	328 44	.537 51	'445 53	'081 94	671 56	'462 49	'554 47	'918 06	48
49	310 78	.509 80	'451 91	'071 79	689 22	'490 20	'548 09	'928 21	49
50	'292 78	'481 43	'458 31	'061 24	707 22	'518 57	'541 69	'938 76	50
51	'274 41	'452 35	'465 44	'050 26	725 59	'547 65	'534 56	'949 74	51
52	'255 65	'422 52	'472 47	'038 82	744 35	'577 48	'527 53	'961 18	52
53	'236 45	'391 89	'479 72	'026 87	763 55	'608 11	'520 28	'973 13	53
54	'216 79	'360 42	'487 77	'014 37	783 21	'639 58	'512 23	'985 63	54
			TT	- D + D					

 $\mathbb{N}_x = \mathbb{D}_x + \mathbb{D}_{x+1} + \dots$ $S_x = N_x + N_{x+1} + \dots$

OM LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x $2\frac{3}{4}$ per cent.

_									
x	$\log D_x$	$\log N_x$	$\log \mathbf{C}_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	col C _x	$\log \mathbf{M}_x$	x
55 56	4'196 59	5°328 04	2°495 55 °5°3 37	4.001 26 3.987 48	5·803 41 ·824 16	6.671 96	3.504 45	5.998 74 4.012 52	55 56
57	175 04	260 35	511 45	973 00	845 53	739 65	488 55	027 00	57
58	132 41		1		867 59		480 55		58
59		188 31	519 45	957 73	*890 40	·81169		042 27	59
	109 60	3	527 35				472 65	058 40	
60	.082 99	150 47	534 65	'924 54	'914 01	*849 53	465 35	.075 46	60
61	061 49	111 32	'541 83	'906 48	.938 21	.888 68	'458 17	'093 52	61
62	.036 01	070 77	548 45	.887 30	963 99	'929 23	451 55	11270	62
63	'009 45	028 70	'554 31	.866 93	990 55	971 30	445 69	133 07	63
64	3.981 74	4.082 03	559 49	.845 25	4.018 59	5.014 97	'440 51	154 75	64
65	95274	939 64	'563 83	822 16	047 26	.060 36	'436 17	:177 84	65
66	922 34	892 40	•566 83	'797 51	'077 66	107 60	433 17	202 49	66
67	890 42	*843 18	.568 79	771 20	109 58	156 82	431 21	228 80	67
68	856 82	791 85	*569 25	'743 05	143 18	'208 15	'430 75	256 95	68
69	821 39	738 23	568 14	712 93	17861	261 77	431 86	287 07	69
						1			
70	'783 96	'682 17	.265 06	680 63	216 04	'317 83	434 94	'319 37	70
71	744 35	623 48	.260 13	646 01	255 65	'376 52	'439 88	353 99	71
72	'702 34	.261 92	552 72	.608 83	297 66	.438 05	'447 28	391 17	72
73	657 73	*497 38	'543 12	.268 88	'342 27	'502 62	'456 88	'431 12	73
74	610 25	429 51	530 33	525 89	'389 75	570 49	'469 67	474 11	74
75	.559 66	358 11	.514 68	'479 64	'440 34	.641 89	'485 32	.520 36	75
78	505 65	'282 88	495 75	429 81	494 35	'717 12	504 25	.570 19	76
77	447 91	'203 51	472 83	376 07	552 09	'796 49	527 17	623 93	77
78	386 09	11967	'445 99	318 09	61391	880 33	554 01	.681 91	78
79	.319 80	'031 00	414 63	255 49	680 20	.969 00	585 37	'744 51	79
1	248 63						1		
80 81		3.937 10	'378 11	187 83	751 37	4.062 90	621 89	812 17	80 81
_	172 13	.837 52	'336 44	11470	.827 87	162 48	663 56	.885 30	
82	089 76	°731 79	288 58	.035 54	910 24	268 21	711 42	964 46	82
83	001 02	.619 40	234 08	2.949 84	.998 98	.380 60		3.020 16	83
84	5,002 31	'499 75	172 60	·857 o3	3.094 69	'500 25	.827 40	142 97	84
85	.801 93	372 24	103 37	'756 41	198 07	627 76	.896 63	243 59	85
86	.690 14	.536 18	*024 97	.647 22	'309 86	'763 82	975 03	352 78	86
87	.569 26	*090 84	1'937 71	.528 80	'430 74	.000 16	2.062 29	'471 20	87
88	438 29	2'935 39	.839 60	'400 15	.261 41	3.064 61	160 40	.299 82	88
89	*296 40	'768 95	'729 92	.260 45	.703 60	'231 05	270 08	'739 55	89
90	142 67	'590 55	*609 09	108 78	.857 33	*409 45	390 91	.891 22	90
91	1'975 52	399 07	472 37	1.943 22	2.024 48	.600 93		2.056 45	91
92	794 59	193 49	324 25	764 45	205 41	.806 51	675 75	235 55	92
93	597 14	1'972 28	154 96	•568 66	402 86	2.027.72	.845 04	'431 34	93
94	383 87	734 54	0.974 12	356 99	616 13	265 46	7.025 85	643 01	94
95						-			95
96	0.898 33	'478 06	.766 57	12479	·849 76 ī·101 67	521 94	233 43	7875 21 1.125 72	96
97	690 33	202 27		0.874 28		797 73 T'205 86			97
98	620 59	0'904 14	292 54	597 68	'379 41	1.092 86	'707 46	'402 32 '699 27	98
99	322 50	.584 89	.000 60	-300 73 T:080 45	677 50	'415 11	.990 31		99
	.009 69	241 42	1.424 91	1.089 45	.990 31	.758 58	0.542 00		_
100	1.666 92	1.857 88	'412 10	.648 56	0.333 08	0'142 12	.287 90	351 44	
101	287 16	'409 09	-099 28	'271 61	.71284	.200 01	900 72		101
102	2.798 25	2.798 25	2.786 47	2.786 47	1.501 42	1'201 75	1,513 23	1.513 23	102
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VALUES OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x 2\frac{3}{4} \text{cent.}

x	a_x	\mathbf{A}_x	P_x	\bar{a}_x	$\overline{\mathrm{A}}_x$	$\overline{\mathrm{P}}_x$	x
10 11 12 13 14	25'955 25'759 25'558 25'352 25'140	·27 857 ·28 382 ·28 919 ·29 471 ·30 037	'01 033 '01 061 '01 089 '01 118	26.452 26.256 26.055 25.849 25.637	·28 239 ·28 771 ·29 316 ·29 875 ·30 450	'01 068 '01 096 '01 156 '01 188	10 11 12 13 14
15	24.924	30 618	°01 181	25'421	'31 036	°01 221	15
16	24.701	31 212	°01 214	25'198	'31 641	°01 256	16
17	24.474	31 820	°01 249	24'971	'32 257	°01 292	17
18	24.242	32 442	°01 285	24'739	'32 886	°01 329	18
19	24.004	33 078	°01 323	24'501	'33 532	°01 369	19
20	23.762	33 728	'01 362	24.259	34 189	'01 409	20
21	23.514	34 390	'01 403	24.011	34 861	'01 452	21
22	23.262	35 066	'01 445	23.759	35 545	'01 496	22
23	23.005	35 753	'01 489	23.502	36 242	'01 542	23
24	22.744	36 453	'01 535	23.241	36 950	'01 590	24
25 26 27 28 29	22.478 22.208 21.933 21.655 21.372	'37 164 '37 887 '38 622 '39 367 '40 124	'01 583 '01 633 '01 684 '01 738 '01 793	22.975 22.430 22.152 21.869	'37 672 '38 404 '39 150 '39 905 '40 672	'01 640 '01 691 '01 745 '01 801 '01 860	25 26 27 28 29
30 31 32 33 34	21.085 20.795 20.500 20.202 19.898	'40 890 '41 668 '42 457 '43 256 '44 068	'01 851 '01 912 '01 975 '02 040 '02 109	21.582 21.292 20.699 20.395	'41 451 '42 238 '43 038 '43 846 '44 671	'01 921 '01 984 '02 050 '02 118 '02 190	30 31 32 33 34
35	19.591	'44 890	°02 180	20.088	'45 504	'02 265 '02 344 '02 426 '02 512 '02 602	35
36	19.280	'45 725	°02 255	19.777	'46 348		36
37	18.964	'46 569	°02 333	19.461	'47 205		37
38	18.643	'47 427	°02 414	19.140	'48 076		38
39	18.318	'48 298	°02 500	18.815	'48 957		39
40	17.988	'49 180	°02 590	18.485	'49 853	'02 697	40
41	17.653	'50 076	°02 685	18.150	'50 761	'02 797	41
42	17.314	'50 984	°02 784	17.811	'51 681	'02 902	42
43	16.970	'51 905	°02 888	17.467	'52 614	'03 012	43
44	16.621	'52 837	°02 999	17.118	'53 561	'03 129	44
45	16.268	53 782	°03 115	16.765	54 519	'03 252	45
46	15.910	54 741	°03 237	16.407	55 490	'03 382	46
47	15.549	55 708	°03 366	16.046	56 469	'03 519	47
48	15.183	56 689	°03 503	15.680	57 462	'03 665	48
49	14.813	57 678	°03 647	15.310	58 466	'03 819	49
50	14.440	.58 676	°03 800	14.937	.59 478	*03 982	50
51	14.064	.59 683	°03 962	14.560	.60 501	*04 155	51
52	13.685	.60 697	°04 133	14.181	.61 529	*04 339	52
53	13.304	.61 719	°04 315	13.800	.62 562	*04 534	53
54	12.920	.62 745	°04 508	13.416	.63 604	*04 741	54
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VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x 2\frac{3}{4} PER CENT.

x	α_x	A_x	P_x	\bar{a}_x	$\overline{\mathbf{A}}_{x}$	$\bar{\mathbf{P}}_x$	x
55 56	12.535	·63 778 ·64 810	°04 712	13.031	*64 649 *65 699	°04 961	55 56
57	11.761	65 846	°05 160	12°257	66 748	°05 446	57
58	11.374	66 884	°05 405	11°870	67 798	°05 712	58
59	10.987	67 920	°05 666	11°483	68 848	°05 996	59
60 61	10.601	·68 953 ·69 983	°05 944 °06 240	11.096	·69 898 ·70 942	°06 299	60 61
62 63 64	9 ^{.8} 33 9 [.] 453 9 [.] 076	71 005 72 024 73 031	.06 554 .06 890 .07 248	10 '3 28 9 ' 948	'71 982 '73 012	°06 970 °07 339 °07 736	62 63 64
65 66	8·703 8·334	75 031 74 032 75 019	•07 630 •08 037	9°571 9°197 8°828	'74 036 '75 049 '76 052	°08 160	65 66
67	7.969	75 994	.08 473	8·463	77 040	°09 103	67
68	7.610	76 954	.08 93 7	8·104	78 015	°09 627	68
69	7.257	77 900	.09 434	7·750	78 974	°10 190	69
70	6.211	78 826	°09 965	7.403	.79 916	10 795	70
71	6.211	79 737		7.063	.80 840	11 446	71
72 73 74	6°238 5°596	·80 629 ·81 499 ·82 346	'11 140 '11 790 '12 485	6°730 6°404 6°086	°81 743 °82 627 °83 488	12 147 12 903 13 717	72 73 74
75	5°287	·83 173	°13 229	5°777	·84 327	°14 597	75
76	4°987	·83 977	°14 026	5°476	·85 143	°15 547	76
77	4.696	*84 754	°14 879	5·185	·85 934	'16 574	77
78	4.415	*85 507	°15 791	4·630	·86 700	'17 685	78
79	4.143	*86 236	°16 768	4·630	·87 440	'18 887	79
80	3.881	*86 936	'17 813	4.366	·88 155	°20 190	80
81	3.628	*87 613	'18 931	4.113	·88 843	°21 602	81
82	3.386	*88 263	'20 126	3.869	·89 503	°23 132	82
83	3.123	·88 883	'21 401	3.635	'90 138	°24 795	83
84	5.030	·89 479	'22 766	3.411	'90 746	°26 601	84
85	2.718	*90 049	°24 220	3'197	°91 326	*28 563	85
86	2.216	*90 590	°25 766	2'994	°91 879	*30 692	86
87	2.323	*91 105	°27 413	2'799	°92 406	*33 0 10	87
88	2°141	'91 593	29 158	2.615	'92 906	35 527	88
89	1°969	'92 056		2.440	'93 380	38 266	89
90	1.805	°92 493	32 978	2.274	•93 831	°41 263	90
91	1.652	°92 903	35 033	2.118	•94 253	°44 493	91
92	1.506	°93 295	37 236	1.969	•94 658	°48 067	92
93 94	1'372	.93 653 .93 998	37 230 39 480 41 923	1.833	95 028 95 390	'51 851 '56 131	93 94
95	1,154	°94 308	44 333	1'581	°95 712	°60 550	95
96		°94 613	46 990	1'463	°96 032	°65 649	96
97		°94 862	49 379	1'366	°96 294	°70 499	97
98	·830	'95 111	·51 980	1,139	96 556	76 058	98
99	·705	'95 447	·55 980		96 909	85 053	99
100	'552	.95 861	·61 756	•981	'97 339	°99 2 42	100
101	'324	.96 483	·72 865	•746	'97 975	1° 3 1 2 46	101
102	'000	.97 324	·97 324	•415	'98 874	2 °38 2 34	102
	000	913"4	91 344	4-5	90 014	30 234	

 0^{M}

LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , $\overline{\Lambda}_x$, \overline{P}_x 2\frac{3}{4} per cent.

log \overline{P}_x	10 11
°039 73	•
'074 71	12 13 14
°086 68 °098 89 °111 20 °123 62 °136 28	15 16 17 18 19
'149 00 '161 94 '174 96 '188 11 '201 37	20 21 22 23 24
'228 25 '241 90 '255 61 '269 47	25 26 27 28 29
'297 48 '311 69 '325 99 '340 50	30 31 32 33 34
369 87 384 82 399 99 415 31	35 36 37 38 39
'430 86 '446 66 '462 64 '478 88 '495 39	40 41 42 43 44
'512 14 '529 19 '546 44 '564 04 '581 93	45 46 47 48 49
600 09 618 60 637 37 656 43 675 86	50 51 52 53 54
	'074 71 '086 68 '098 89 '111 20 '123 62 '136 28 '149 00 '161 94 '174 96 '188 11 '201 37 '214 76 '228 25 '241 90 '255 61 '269 47 '283 44 '297 48 '311 69 '325 99 '340 50 '355 11 '369 87 '384 82 '399 99 '415 31 '430 86 '446 66 '462 64 '478 88 '495 39 '512 14 '564 04 '581 93 '600 09 '618 60 '637 37 '656 43

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LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x $2\frac{3}{4}$ cent.

x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \bar{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
55 56 57	1°131 45 °118 86 °105 88	7.804 67 .811 64 .818 53	2.673 22 .692 78 .712 65	1°114 98 °101 88 °088 38	7.810 56 817 56 824 44	2.695 58 .715 67 .736 05	55 56 57
58 59	.092 20 .078 71	·825 32 ·832 00	732 82 753 29	°074 45 °060 06	·831 22 ·837 89	756 77 777 84	58 59
60 61	°064 48 °049 83	*838 55 *844 99	774 07 795 16	°045 17 °029 83	*844 46 *850 90	'799 30 '821 07	60 61
62 63 64	°034 76	·851 29 ·857 48	'816 53 '838 23 '860 22	°014 02 °0997 74	*857 22 *863 39	*843 20 *865 66	63
65	0.986 90	·863 51 ·869 42	·882 52	*980 94 *963 65	·869 44 ·875 34	·888 50	64
66 67 68	'970 06 '952 76 '935 03	'875 17 '880 78 '886 23	'905 11 '928 02 '951 20	945 85 927 53 908 69	*881 11 *886 72 *892 18	'935 26 '959 18 '983 49	66 67 68
69 70	°916 84	·891 54 ·896 67	974 70	.889 32	·897 48	1.008 14	69
71 72	·879 13 ·859 61	*901 66 *906 49	1°022 53 °046 88	869 43 848 97 827 99	'902 63 '907 63 '912 45	°033 22 °058 65 °084 4 7	70 71 72
73 74	*839 65 *819 26	911 15	°071 50	·806 44 ·784 36	917 12	110 69	73 74
75 76	798 45 777 23	'919 98 '924 16	'121 53 '146 93	.761 71 .738 50	*925 97 *930 15	°164 26	75 76
77 78	755 60 733 58	*928 16 *932 00	°172 56 °198 42	'714 73 '690 42	°934 17 °938 02	°219 43	77 78
79 80	.688 47	'935 69 '939 20	°224 49 °250 73	.665 55 .640 11	'941 71 '945 25	'276 16 '305 14	79 80
81 82	665 39 642 03	*942 57 *945 78	'277 18 '303 75	.614 13 .587 62	°948 62 °951 84	334 49 364 21	81 82
83 84	°618 38 °594 44	'948 82 '951 72	'33° 44 '357 28	°560 54 °532 92	°954 91 °957 83	*394 36 *424 90	83 84
85 86 87	°570 31 °546 04	'954 48 '957 08	'384 17 '411 04	°504 80 °476 19	'960 59 '963 22	'455 80 '487 03	85 86
88 89	'521 58 '497 10 '472 55	*959 54 *961 86 *964 05	437 96 464 76 491 50	'447 °5 '417 49 '387 44	°965 70 °968 04 °970 25	°518 65 °550 56 °582 81	87 88 89
90 91	*447 88 *423 55	.068 o3	518 23 544 48	356 79 326 01	'972 35 '974 30	·615 56 ·648 29	90 91
92 93	*398 90 *375 14	969 86 971 52	*570 96 *59 6 3 8	'294 31 '263 09	*976 16 *977 85	681 85	92 93
94 95	°350 67 °327 82	°973 12	·622 45 ·646 73	°230 30	·979 50 ·980 97	'749 20 '782 11	94 95
96 97	'303 94 '283 55	'975 95 '977 09	672 01	'165 19 '135 42	982 42	·817 23 ·848 18	96 97
98	262 39 231 73	°978 23 °979 76	715 84 748 03	°103 63 °056 68	984 78 986 36	·881 14 ·929 69	98 99
100 101	°190 96	981 64 984 45	°790 68 °862 52	7.991 59 .873 03	'988 29 '991 12	°996 70	100 101
102	.000 00	988 22	988 22	.618 08	995 08	*377 00	102



OM

3 PER CENT.

CONSTANTS.

Constant	Number	Logarithm
<i>i</i> (1+ <i>i</i>)	*03 1*03	2.477 121 3
$(1+i)^{\frac{1}{2}}$	1.014 889 5	0'012 837 2
$(1+i)^{\frac{1}{4}}$ v	°970 873 8	0°003 209 3 1°987 162 8
$\mathcal{O}^{\frac{1}{2}}$ $\mathcal{O}^{\frac{1}{4}}$	°9 ⁸ 5 3 ² 9 3 °99 ² 637 5	ī·993 581 4 ī·996 790 7
<i>d</i> δ	°029 126 2 °029 558 8	2·464 284 0 2·470 686 8

OM

COMMUTATION TABLE

3 PER CENT.

x	D_x	\mathbb{N}_x	S_x	\mathbf{C}_x	\mathbf{M}_x	R_x	x
10 11 12 13 14 15 16 17 18 19 20 21 22 23	74 409 71 998 69 663 67 400 65 208 63 085 61 027 59 032 57 098 55 223 53 404 51 639 49 926 48 263	1 910 061 1 835 652 1 763 654 1 693 991 1 626 591 1 561 383 1 498 298 1 437 271 1 378 239 1 321 141 1 265 918 1 212 514 1 160 875 1 110 949	39 705 377 37 795 316 35 959 664 34 196 010 32 502 019 30 875 428 29 314 045 27 815 747 26 378 476 25 000 237 23 679 096 22 413 178 21 200 664 20 039 789	244'18 238'47 233'57 228'75 224'01 220'60 217'20 214'99 212'15 210'40 209'64 208'76 208'76 209'07	18 776.82 18 532.64 18 294.17 18 060.60 17 831.85 17 607.84 17 387.24 17 170.04 16 955.05 16 742.90 16 532.86 16 114.10 15 905.34	753 594'90 734 818'08 716 285'44 697 991'27 679 930'67 662 098'82 644 490'98 627 103'74 609 933'70 592 978'65 576 235'75 559 703'25 543 380'39 527 266'29	10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31	46 648 45 080 43 556 42 076 40 637 39 239 37 879 36 557	1 110 949 1 062 686 1 016 038 970 958 927 402 885 326 844 689 805 450 767 571	18 928 840 17 866 154 16 850 116 15 879 158 14 951 756 14 066 430 13 221 741 12 416 291	209.67 209.67 210.52 211.59 213.73 214.72 216.71 218.79 220.19	15 965 34 15 696 27 15 486 60 15 276 08 15 064 49 14 850 76 14 636 04 14 419 33 14 200 54	527 200 29 511 360 95 495 664 68 480 178 08 464 902 00 449 837 51 434 986 75 420 350 71 405 931 38	24 25 26 27 28 29 30 31
32 33 34 35 36 37 38 39	35 272 34 023 32 808 31 627 30 480 29 364 28 279 27 225	731 014 695 742 661 719 628 911 597 284 566 804 537 440 509 161	11 648 720 10 917 706 10 221 964 9 560 245 8 931 334 8 334 050 7 767 246 7 229 806	222.07 223.65 224.96 228.12 229.29 230.19 231.76	13 980·35 13 758·28 13 534·63 13 309·67 13 082·98 12 854·86 12 625·57 12 395·38	391 730 84 377 750 49 363 992 21 350 457 58 337 147 91 324 064 93 311 210 07 298 584 50	32 33 34 35 36 37 38 39
40 41 42 43 44 45 46 47	26 201 25 205 24 237 23 295 22 379 21 489 20 622 19 779	481 936 455 735 430 530 406 293 382 998 360 619 339 130 318 508	6 720 645 6 238 709 5 782 974 5 352 444 4 946 151 4 563 153 4 202 534 3 863 404	232.75 234.56 235.66 236.96 238.79 240.56 242.78 245.14	12 163.62 11 930.87 11 696.81 11 461.15 11 224.19 10 985.40 10 744.84 10 502.06	286 189·12 274 025·50 262 094·63 250 397·82 238 936·67 227 712·48 216 727·08 205 982·24	40 41 42 43 44 45 46 47
48 49 50 51 52 53 54	18 958 18 158 17 378 16 618 15 877 15 154 14 448	298 729 279 771 261 613 244 235 227 617 211 740 196 586	3 544 896 3 246 167 2 966 396 2 704 783 2 460 548 2 232 931 2 021 191	247.64 250.69 253.80 257.37 260.94 264.69 268.98	10 256'92 10 009'28 9 758'59 9 504'79 9 247'42 8 986'48 8 721'79	195 480·18 185 223·26 175 213·98 165 455·39 155 950·60 146 703·18 137 716·70	48 49 50 51 52 53 54

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COMMUTATION TABLE

3 PER CENT.

x	D_x	\mathbb{N}_x	\mathbb{S}_x	C_x	M_x	R_x	x
	D_x	IN x				10,0	
55	13 758.	182 138'	. 0	, 0	8 452 81	128 994'91	55
56	13 084	122 380.	1 642 467° 1 474 087°	277°47 281°99	8 179.63 7 902.16	120 542°10	56 57
57 58	11 781.	142 871	1 318 791.	286.24	7 620'17	104 460'31	58
59	11 152	131 090.	0 ,,	291.00	7 333.63	96 840.14	59
60	10 536.	119 938	1 044 830.	295'30	7 042.54	89 506.21	60
61	9 933'7	109 401,0	924 892'1	770	6 747.24	82 463.97	61
62	9 344.8	99 468.2	815 490 2	0 0 0	6 44 7 .74 6 144.38	75 716'73 69 268'99	62 63
63 64	8 769'3 8 207'1	90 123 . 4	716 022 ' 0 625 898'6		5 837.64	63 124.61	64
65	7 658.4	73 147'0	544 544.5		5 527.98	57 286 97	65
66	7 123'3	65 488.6	471 397 5	313.42	5 215.96	51 758.99	66
67	6 602.2	58 365.3	405 908 9		4 902.54	46 543.03	67
68	6 096.1	51 762.8	347 543.6		4 588.47	41 640,49	68 69
69	5 604.9	45 666.7	295 780.8	312.08	4 274 [.] 83 3 962 [.] 75	37 052 02	70
70 71	5 129.6 4 671.0	40 061°8 34 932°2	250 114.1	304.88	3 653.63	28 814.44	71
72	4 230'1	30 261.5	175 120.1	299'01	3 348.75	25 160.81	72
73	3 807.9	26 031.1	144 858'9	291.76	3 049 74	21 812.06	73
74	3 405.3	22 223'2	118 827.8	282.60	2 757.98	18 762.32	74
75	3 023'4	18817'9	96 604.6	271.94	2 475.38	16 004'34	75 76
76 77	2 326.2	15 794°5	77 786°7 61 992°2	259.71	2 203'44 1 943'73	13 528.96	77
78	2 012'7	10 804.0	48 861.1	230.47	1 697'97	9 381.79	78
79	1 723.6	8 792'2	38 056.2	213.89	1 467.50	7 683.82	79
80	1 459.5	7 068.6	29 264.0	196.14	1 253.61	6 216.32	80
81	1 220'8	5 600,1	22 195'4	177.79	1 057'44	4 962.71	81 82
82 83	1 007.4	4 388°3 3 380°87	16 586.3	139.48	879.65 720.80	3 905.27	83
84	655.62	2 561.61	8 817.08	131,03	281.05	2 304.82	84
85	515.20	1 902,00	6 255 47	102'95	459'99	1 723.80	85
86	397.54	1 390'49	4 349 48	85.734	357.037	1 263.812	86
87	300.55	992.92	2 958 99	69.958	271'303	906.775	87
88	159'39	692.73	1 966'04 1 273'31	55.676	145'669	635,472	89
90	111.60	311.82	803,10	32.288	102,23	288.458	90
91	75.766	200'215	490'279	23.429	69.935	185.935	91
92	49.831	124'449	290'064	16.830	46.306	116,000	92
93	31.249	74.618	165.615	11'370	18.002 8	69.794	93
94	19,560	43.069	90.997	7.479 7	1		
95	6.596 3	23.809	47.928	4.626 5 2.786 c	5.899 6	22'412 5	
97	3'297 7				3,113 6	5.986 8	97
98	1.656 1	3.024 8	5.504 6	.803 0	1.268	2.873 2	98
99	.803 6						
100	364	•564 8	8144				
101 102	.121 (145		102
102	'049	049	049	047	047	347	

OM

LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x $\mathbf{3}_{\text{CENT.}}^{\text{PER}}$

x	$\log \mathrm{D}_x$	$\log N_x$	$\log \mathrm{C}_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	col C _x	$\operatorname{col} \mathrm{M}_x$	x
10 11 12 13 14 15 16	4·871 63 ·857 32 ·843 00 ·828 66 ·814 30 ·799 92 ·785 52	6 281 05 263 79 246 41 228 91 28 11 28 1175 60	2'387 71 '377 43 '368 41 '359 35 '350 27 '343 61 '336 86	4.273 62 .267 93 .262 31 .256 73 .251 19 .245 70 .240 23	5.128 37 .142 68 .157 00 .171 34 .185 70 .200 08	7.718 95 .736 21 .753 59 .771 09 .788 72 .806 49 .824 40	3.612 29 .622 57 .631 59 .640 65 .649 73 .656 39 .663 14	5.726 38 .732 07 .737 69 .743 27 .748 81 .754 30 .759 77	10 11 12 13 14 15 16
17 18 19	771 09 756 62 742 12	157 54 139 32 120 95	*332 41 *326 64 *323 04	*234 77 *229 30 *223 83	228 91 243 38 257 88	*842 46 *860 68 *879 05	667 59 673 36 676 96	.765 23 .770 70 .776 17	17 18 19
20 21 22 23 24	'727 57 '712 97 '698 33 '683 61 '668 83	°102 41 °083 69 °064 78 °045 69 °026 40	'321 48 '319 64 '319 64 '320 30 '321 53	'218 34 '212 79 '207 20 '201 54 '195 79	272 43 287 03 301 67 316 39 331 17	*897 59 *916 31 *935 22 *954 31 *973 60	.678 52 .680 36 .680 36 .679 70 .678 47	781 66 787 21 792 80 798 46 804 21	20 21 22 23 24
25 26 27 28 29	653 98 639 05 624 04 608 92 593 71	006 91 5'987 20 '967 27 '947 10 '926 70	'323 29 '325 49 '329 87 '331 87 '335 87	189 95 184 01 177 95 171 75 165 42	'346 02 '360 95 '375 96 '391 08 '406 29	.0993 09 6.012 80 .032 73 .052 90 .073 30	.676 71 .674 51 .670 13 .668 13	'810 05 '815 99 '822 05 '828 25 '834 58	25 26 27 28 29
30 31 32 33 34	*578 40 *562 97 *547 43 *531 77 *515 98	'906 04 '885 12 '863 92 '842 45 '820 67	340 03 342 79 346 49 349 58 352 10	158 94 152 30 145 52 138 56 131 44	'421 60 '437 03 '452 57 '468 23 '484 02	.093 96 .114 88 .136 08 .157 55 .179 33	.659 97 .657 21 .653 51 .650 42 .647 90	*841 06 *847 70 *854 48 *861 44 *868 56	30 31 32 33 34
35 36 37 38 39	'500 06 '484 01 '467 81 '451 47 '434 97	798 59 776 18 753 43 730 33 706 85	'355 43 '358 17 '360 38 '362 08 '365 03	124 17 116 70 109 07 101 25 093 26	'499 94 '515 99 '532 19 '548 53 '565 03	*201 41 *223 82 *246 57 *269 67 *293 15	644 57 641 83 639 62 637 92 634 97	.875 83 .883 30 .890 93 .898 75 .906 74	35 36 37 38 39
40 41 42 43 44	'418 31 '401 48 '384 47 '367 26 '349 85	682 99 658 71 634 00 608 84 583 20	'366 88 '369 32 '372 28 '374 68 '378 01	*085 06 *076 67 *068 07 *059 23 *050 15	.581 69 .598 52 .615 53 .632 74 .650 15	'317 01 '341 29 '366 00 '391 16 '416 80	633 12 630 68 627 72 625 32 621 99	'914 94 '923 33 '931 93 '940 77 '949 85	40 41 42 43 44
45 46 47 48 49	'332 21 '314 34 '296 20 '277 79 '259 07	'557 °5 '53° 37 '503 12 '475 28 '446 80	'381 23 '385 21 '389 42 '393 82 '399 14	°011 02 °000 40	.667 79 .685 66 .703 80 .722 21 .740 93	'442 95 '469 63 '496 88 '524 72 '553 20	'618 77 '614 79 '610 58 '606 18	999 60	45 46 47 48 49
50 51 52 53 54	'240 01 '220 59 '200 77 '180 52 '159 79	'417 66 '387 81 '357 20 '325 80 '293 55	'404 49 '410 56 '416 54 '422 73 '429 72	3.989 39 .977 94 .966 02 .953 59 .940 60	759 99 779 41 799 23 819 48 840 21	.582 34 .612 19 .642 80 .674 20 .706 45	595 51 589 44 583 46 577 27 570 28	°022 06 °033 98 °046 41	50 51 52 53 54
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logarithms and co-logarithms of D_x , N_x , C_x , M_x $3_{cent.}^{per}$

x	$\log \mathrm{D}_x$	$\log N_x$	$\log \mathrm{C}_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
55 56	4°138 55	5.260 40	2°436 45	3.927 00	5.861 45 .883 26	6.739 60	3·563 55 ·556 79	4.073 00 .087 27	55 5 6
57	'094 31	,101 19	450 23	897 74	905 69	808 84	549 77	102 26	57
58	071 20	154 94	457 18	.881 96	928 80	·845 o6	542 82	118 04	58
59	.047 35	117 57	°464 o3	.865 32	952 65	.882 43	535 97	134 68	59
60	.022 67	.078 96	'470 27	.847 73	'977 33	921 04	.529 73	152 27	60
61	3,002 11	'039 03	'476 40	829 12	4.002 89	.060 97	.523 60	170 88	61
62	970 57	4.997 68	481 96	.809 41	'029 43	5.002 32	.518 04	190 59	62
63	'942 97	954 84	.486 77	.788 48	057 03	'045 16	513 23	'211 52	63
64	91419	.010 38	°490 89	.766.23	*085 81	089 62	.209 11	233 77	64
65	*884 14	.864 20	'494 18	.742 56	115 86	135 80	.505 82	257 44	65
66	·852 68	.816 17	'496 12	'717 33	147 32	.183 83	.203 88	'282 67	66
67	.819 71	.766 15	497 03	.690 42	.180 50	.233 82	'502 97	'309 58	67
68	.785 02	'714 02	'496 43	.661 64	'214 95	285 98	503 57	.338 33	68
69	'748 57	.659 60	494 27	630 92	251 43	'340 40	505 73	·369 0 8	69
70	.710 08	.602 73	'490 13	597 99	•289 92	397 27	.209 87	'402 01	70
71	'669 41	543 23	'484 13	'562 72	°33° 59	456 77	.215 87	437 28	71
72	626 35	' 48 o 89	475 68	.524 88	'373 ⁶ 5	.219 11	524 32	475 12	72
73	•580 69	415 49	465 02	484 26	'419 31	584 51	534 98	515 74	73
74	532 15	.346 81	'451 18	'440 59	·467 85	653 19	.548 82	559 41	74
75	°480 50	274 57	434 47	'393 64	.219 20	725 43	'565 53	606 36	75
76	425 44	198 51	'414 48	343 10	574 56	'801 49	585 52	'656 90	76
77 78	366 64	'118 30	390 51	288 63	633 36	'881 70	609 49	'711 37	77
79	°3°3 77 °236 43	3.944 10	362 62	166 57	'696 23 '763 57	'966 38 4'055 90	669 81	'770 08 '833 43	78 79
80							-		
81	°164 19	*849 33 *748 89	292 62	098 15	·835 81 ·913 36	150 67	707 38	901 85	80 81
82	000 04	642 30	249 09	2'944 31	913 30	357 70	750 11	3.022 69	82
83	2'913 42	529 03	145 43	857 81	3.086 28	470 97	854 57	142 19	83
84	.816 62	408 51	'082 90	'764 19	.183 32	591 49	917 10	235 81	84
85	712 22	'280 12	012 61	662 75	287 78	719 88	987 39	337 25	85
86	599 38	143 17	1,033 12	552 71	'400 62	856 83	2.066 85	447 29	86
87	477 44	2,096 03	844 84	433 45	.522 56	3.003 04	.122 19	566 55	87
88	345 41	.840 56	745 67	303 94	654 59	159 44	254 33	.696 06	88
89	202 47	673 21	634 94	.163 36	797 53	326 79	365 06	.836 64	89
90	'047 68	'493 90	.513 05	'010 82	952 32	.206 10	486 95	.989 18	90
91	1.879 48	301 50	375 28	1.844 69	2,150 25	698 50	624 72	2.122 31	91
92	697 50	· 0 94 99	*226 09	'664 70	*302 50	-905 01	'773 91	335 30	92
93	498 99	1.872 84	'055 75	'467 99	.201 01	2'127 16	944 25		93
94	*284 66	634 16	0.873 89	255 41	715 34	'365 84	1,159 11	744 59	94
95	*049 98	'376 74	665 25	022 27	-950 02	623 26	334 75		95
96	0'797 01	099 98	444 99		1°202 99	900 02	555 01		96
97 98	'518 22	o'800 89 '480 70	.189 11	493 26	'481 78	1,100 11	.810 89		98
99	'219 07 1'905 21	136 31	619 37	195 35	'780 93 0'094 79	·519 30 ·863 69	0.094 79		99
100	1						1		
101	.180 28	751 89	305 50		'438 62 '819 44	0°248 11	1.008 37		
102	2.690 60	302 33	2.991 63		1.309 40	1.309 40	322 23		102
	1 3,5 30	12 090 00	1 -11 11	1 0/1/11	1 309 40	1 309 40	322 23	322 -3	

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VALUES OF a_x , Λ_x , P_x , and of \overline{a}_x , $\overline{\Lambda}_x$, \overline{P}_x

3 PER CENT.

x	α_x	\mathbf{A}_x	P_x	$ar{a}_x$	$\overline{\mathrm{A}}_x$	$\overline{\mathrm{P}}_{x}$	x
10 11 12 13 14	24.669 24.496 24.317 24.133 23.945	.25 234 .25 740 .26 261 .26 796 .27 346	.00 983 .01 010 .01 086 .01 096	25.166 24.993 24.814 24.630 24.442	.25 612 .26 124 .26 653 .27 197 .27 752	'01 018 '01 045 '01 074 '01 104 '01 135	10 11 12 13 14
15	23.751	.27 911	'01 128	24.248	.28 326	'01 168 '01 202 '01 238 '01 275 '01 314	15
16	23.552	.28 491	'01 160	24.049	.28 914		16
17	23.347	.29 086	'01 195	23.844	.29 520		17
18	23.138	.29 695	'01 230	23.635	.30 138		18
19	22.924	.30 319	'01 267	23.421	.30 770		19
20 21 22 23 24	22.481 22.252 22.019 21.781	'30 958 '31 610 '32 275 '32 956 '33 648	'01 306 '01 346 '01 388 '01 432 '01 477	23.202 22.978 22.749 22.516 22.278	'31 418 '32 080 '32 757 '33 445 '34 149	'01 354 '01 396 '01 440 '01 485 '01 533	20 21 22 23 24
25	21'539	34 353	'01 524 '01 573 '01 624 '01 677 '01 733	22.036	'34 864	'01 582	25
26	21'292	35 072		21.789	'35 594	'01 634	26
27	21'041	35 802		21.538	'36 336	'01 687	27
28	20'786	36 545		21.283	'37 090	'01 743	28
29	20'527	37 300		21.024	'37 856	'01 801	29
30	20°264	38 066	°01 790	20'761	'38 633	°01 861	30
31	19°996	38 845	°01 850	20'493	'39 425	°01 924	31
32	19°725	39 636	°01 912	20'222	'40 226	°01 989	32
33	19°449	40 438	°01 977	19'946	'41 042	°02 058	33
34	19°169	41 253	°02 045	19'666	'41 870	°02 129	34
35 36 37 38 39	18.885 18.596 18.303 18.004 17.702	'42 083 '42 923 '43 778 '44 646 '45 529	'02 116 '02 190 '02 268 '02 349 '02 434	19.382 19.903 18.800 18.201	'42 709 '43 563 '44 429 '45 313 '46 206	'02 204 '02 282 '02 363 '02 449 '02 539	35 36 37 38 39
40 41 42 43 44	17.394 17.081 16.441 16.441	'46 425 '47 336 '48 261 '49 201 '50 153	°02 524 °02 618 °02 717 °02 821 °02 931	17.891 17.578 17.261 16.938 16.611	'47 116 '48 042 '48 979 '49 933 '50 900	°02 634 °02 733 °02 838 °02 948 °03 064	40 41 42 43 44
45	15°782	'51 122	°03 046	16·279	'51 881	'03 187	45
46	15°445	'52 103	°03 168	15·942	'52 877	'03 317	46
47	15°104	'53 097	°03 297	15·600	'53 888	'03 454	47
48	14°757	'54 104	°03 434	15·253	'54 914	'03 600	48
49	14°408	'55 123	°03 578	14·904	'55 946	'03 754	49
50	14.054	56 154	°03 730	14.550	'56 992	°03 917	50
51	13.697	57 194	°03 892	14.193	'58 047	°04 090	51
52	13.336	58 244	°04 063	13.832	'59 114	°04 274	52
53	12.973	59 302	°04 244	13.469	'60 187	°04 469	53
54	12.607	60 368	°04 437	13.103	'61 269	°04 676	54

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VALUES OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

3 PER

x	a_x	A_x	P_x	$ar{a}_x$	$\overline{\mathbf{A}}_x$	$\overline{\mathrm{P}}_x$	x
55 56 57 58	12°239 11°869 11°498 11'127	61 440 62 516 63 596 64 679	°04 641 °04 858 °05 088 °05 334	12'735 12'365 11'994 11'622	·62 357 ·63 451 ·64 547 ·65 647	°04 896 °05 131 °05 382 °05 648	55 56 57 58
59 60 61 62 63	10°755 10°384 10°013 9°644 9°277	65 761 66 844 67 922 68 999	°05 594 °05 872 °06 167 °06 482 °06 818	11.250 10.879 10.508 10.139 9.772	·66 746 ·67 843 ·68 940 ·70 030 ·71 116	°05 933 °06 236 °06 561 °06 907 °07 278	59 60 61 62 63
64 65 66 67	8.913 8.551 8.194 7.840	'71 128 '72 181 '73 223 '74 252	'07 175 '07 557 '07 965 '08 400	9°4°7 9°045 8°687 8°333	72 194 73 263 74 321 75 3 ⁶ 7	°07 674 °08 099 °08 555 °09 044	64 65 66 67
68 69 70 71 72	7'491 7'148 6'810 6'479 6'154	75 270 76 269 77 252 78 219 79 164	'08 864 '09 361 '09 892 '10 459 '11 066	7.984 7.640 7.302 6.971 6.645	76 399 77 416 78 415 79 396 80 357	'09 569 '10 132 '10 738 '11 390 '12 092	68 69 70 71 72
73 74 75 76	5.836 5.526 5.224 4.930	.80 088 .80 992 .81 873 .82 729	'11 716 '12 410 '13 154 '13 951	6.327 6.016 5.419	·81 298 ·82 216 ·83 110 ·83 981	12 849 13 665 14 545 15 497	73 74 75 76
77 78 79 80	4.645 4.368 4.101 3.843	*83 558 *84 363 *85 141 *85 893	14 802 15 714 16 691	5.133 4.856 4.588 4.329	.84 827 .85 646 .86 439 .87 204	'16 525 '17 637 '18 842 '20 145	77 78 79 80
81 82 83 84	3.595 3.356 3.127 2.907	*86 618 *87 315 *87 981 *88 622	18 852 20 045 21 320 22 682	4.579 3.839 3.609 3.388	.87 942 .88 651 .89 333 .89 986	'21 558 '23 091 '24 754 '26 561	81 82 83 84
85 86 87 88 89	2.697 2.498 2.307 2.127 1.956	.89 234 .89 811 .90 367 .90 893 .91 388	'24 134 '25 677 '27 322 '29 066 '30 914	3.177 2.975 2.783 2.601 2.428	'90 610 '91 205 '91 773 '92 312 '92 824	*28 524 *30 654 *32 975 *35 492 *38 234	85 86 87 88 89
90 91 92 93 94	1°794 1°643 1°497 1°365	'91 863 '92 302 '92 726 '93 111	32 879 34 929 37 129 39 369 41 807	2.263 2.100 1.826 1.693	'93 311 '93 766 '94 204 '94 604	'41 231 '44 462 '48 039 '51 824 '56 104	90 91 92 93 94
95 96 97 98	1.236 1.122 1.009 .917 .826	'93 487 '93 819 '94 148 '94 415 '94 685	'44 211 '46 864 '49 246 '51 838	1.575 1.458 1.362 1.266	'94 995 '95 344 '95 690 '95 975 '96 258	.60 528 .65 627 .70 476 .76 027	95 96 97 98
99 100 101 102	703 551 324	*95 °47 *95 488 *96 139 *97 °87	'55 826 '61 580 '72 632 '97 087	1°137 '979 '746 '415	*96 640 *97 106 *97 796 *98 774	.85 010 .99 181 1,31 181 2,38 113	99 100 101 102

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LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

$\begin{vmatrix} x \end{vmatrix}$	$\log a_x$	$\log A_x$	$\log P_x$	$\log ar{a}_x$	$\log \overline{\Lambda}_x$	$\log \overline{P}_x$	x
10	1'409 42	7'401 99	3.992 57	1.400 81	1.408 44	2.007 62	10
11	'406 47	'410 61	2.004 14	397 82	.417 04	.019 20	11
12	'403 41	'419 31	.015 90	394 70	.425 75	.031 04	12
13	'400 25	'428 07	.027 82	391 46	.434 52	.043 05	13
14	'396 98	'436 89	.039 91	388 14	.443 29	.055 15	14
15	'393 59	'445 78	'052 19	384 68	'452 19 '461 11 '470 12 '479 11 '488 13	067 52	15
16	'390 08	'454 71	'064 63	381 10		080 01	16
17	'386 45	'463 68	'077 23	377 38		092 72	17
18	'382 70	'472 68	'089 98	373 56		105 54	18
19	'378 83	'481 71	'102 88	369 61		118 53	19
20	'374 84	'49° 77	115 93	'365 53	'497 18	131 65	20
21	'370 72	'499 82	129 10	'361 31	'506 23	144 92	21
22	'366 45	'508 87	142 42	'356 96	'515 30	158 33	22
23	'362 08	'517 93	155 85	'352 49	'524 33	171 84	23
24	'357 57	'526 96	169 39	'347 88	'533 38	185 51	24
25	'352 93	535 97	183 04	'343 13	542 38	'199 23	25
26	'348 15	544 96	196 81	'338 24	551 38	'213 15	26
27	'343 23	553 91	210 68	'333 21	560 34	'227 14	27
28	'338 18	562 83	224 65	'328 03	569 26	'241 22	28
29	'332 99	571 71	238 72	'322 72	578 13	'255 42	29
30	'327 64	580 54	'252 90	'317 25	.586 96	269 70	30
31	'322 15	589 33	'267 18	'311 61	.595 77	284 16	31
32	'316 49	598 09	'281 60	'305 82	.604 51	298 68	32
33	'310 68	606 79	'296 11	'299 86	.613 23	313 38	33
34	'304 69	615 46	'310 77	'293 72	.621 90	328 18	34
35	'298 53	'624 11	'325 58	287 40	.630 52	'343 11	35
36	'292 17	'632 69	'340 52	280 87	.639 12	'358 24	36
37	'285 62	'641 26	'355 64	274 16	.647 67	'373 52	37
38	'278 86	'649 78	'370 92	267 20	.656 22	'389 02	38
39	'271 88	'658 29	'386 41	260 05	.664 70	'404 65	39
40	'264 68	'666 75	'402 07	'252 63	673 17	'420 53	40
41	'257 23	'675 19	'417 96	'244 97	681 62	'436 64	41
42	'249 53	'683 60	'434 07	'237 07	690 01	'452 94	42
43	'241 58	'691 97	'450 39	'228 86	698 39	'469 53	43
44	'233 35	'700 30	'466 95	'220 40	706 72	'486 32	44
45	'224 84	'708 61	'483 77	'211 63	715 01	503 38	45
46	'216 03	'716 86	'500 83	'202 54	723 27	520 73	46
47	'206 92	'725 07	'518 15	'193 12	731 49	538 37	47
48	'197 49	'733 23	'535 74	'183 36	739 68	556 33	48
49	'187 73	'741 33	'553 60	'173 30	747 77	574 46	49
50	177 65	'749 38	571 73	162 86	755 81	'592 95	50
51	167 22	'757 35	590 13	152 07	763 78	'611 70	51
52	156 43	'765 25	608 82	140 89	771 69	'630 80	52
53	145 28	'773 07	627 79	129 34	779 50	'650 17	53
54	133 76	'780 81	647 05	117 37	787 24	'669 87	54

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LOGARITHMS OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x

			,,		02 004, 224		CENT
x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \bar{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \bar{\mathrm{P}}_x$	x
55 56	1'121 85	ī·788 45 ·795 99	2.666 60 686 44	1,102 00	ī·794 89 ·802 44	2.689 89 .710 24	55 56
57 58	096 85	·803 43 ·810 76	706 58 727 02	°078 96 °065 28	·809 88 ·817 21	'730 91 '751 93	57 58
59 60	°070 22	·817 97 ·825 06	747 75	.036 29	·824 43 ·831 51	773 27	59 60
61 62	°041 92	·832 01 ·838 84	.790 09 .811 73	°021 52	*838 47 *845 28	·816 95 ·839 29	61 62
63 64	0.011 84	·845 51 ·852 04	·833 64 ·855 85	0'989 97	·851 97 ·858 50	·862 00 ·885 04	63 64
65	980 06	.858 42	*878 36	'956 43	·864 88	908 46	65
66 67	'963 49 '946 44	*864 65 *870 71	'901 16 '924 27	'938 88 '920 82	·871 11	°932 23 °956 36	66 67
68 69	'928 97 '911 03	.876 62 .882 35	'947 65 '971 32	.902 24 .883 12	*883 o9 *888 83	*980 84 1*005 70	68
70 71	*892 65 *873 82	·887 91 ·893 31	1.019 49	·863 47 ·843 27	*894 40 *899 80	°030 92 °056 52	70 71
72 73	*854 54 *834 80	·898 53 ·903 57	°043 99 °068 77	822 51	'905 02 '910 08	°082 50	72 73
74 75	*814 66 *794 07	'908 44 '913 14	°093 78	779 34 756 93	'914 96 '919 65	°135 61	74
76 77	7773 °7 751 66	. 917 66	119 57 144 59 170 33	733 94	924 18	190 25	75 76
78 79	731 00 729 85 707 67	'921 99 '926 15	176 33 196 30	.686 28 .661 60	'928 53 '932 71	°218 14	77 78
80	.685 14	'930 14 '933 96	.248 82	.636 38	°936 71 °940 54	°275 13	79 80
81 82	639 08	'937 61 '941 09	·275 36	.610 59 .584 25	°944 20 °947 68	363 44	81 82
83 84	.201 89	'944 39 '947 54	·328 78 ·355 68	557 36 529 93	°951 01 °954 17	°393 65 °424 24	83 84
85 86	'567 90 '543 79	°95° 53	*382 63 *409 54	'501 96 '473 53	°957 18 °960 02	°455 21 °486 49	85 86
87 88	'519 49 '495 15	956 o1 958 53	°436 52 °463 38	'444 53 '415 12	.962 71 .965 26	·518 18	87 88
89 90	'470 74 '446 22	'960 89 '963 14	°490 15 °516 92	.382 21	°967 66	·582 45 ·615 22	89
91 92	'422 02 '397 49	965 21 967 20	543 19 569 71	354 70 324 06 292 48	972 05	647 99	90 91
93 94	373 85	.969 00	595 15 621 25	·261 38 ·228 71	°974 °7	.681 59 .714 53	92 93
95	349 50 326 76	'97° 75	645 53	197 34	'977 7° '979 29	°748 99 °781 96	94 95
96 97	'302 97 '282 67	'973 81 '975 04	·670 84 ·692 37	'163 79 '134 11	°980 87 °982 16	*817 08 *848 04	96 97
98 99	°261 63	*976 2 8 *977 94	.714 65 .746 84	°102 47 °055 68	.983 44 .985 16	·88o 97 ·929 47	98 99
100 101	°190 51	'979 95 '982 90	.789 44 .861 13	7.990 82 :872 45	*987 25 *990 32	°996 43	100 101
102	,000 00	.987 17	*987 17	617 86	994 64	.376 78	102

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VALUES OF TEMPORARY ANNUITIES OF 1

3 PER CENT.

	IO	II	12	13	14	15	16	17	18	19	
Dura-								-			Dura- tion.
	24.669	24.496	24.317	24.133	23.945	23.751	23.552	23.347	23.138	22.924	
0	,000	0000	,000	.000	.000	,000	.000	.000	,000	,000	0
2	.968	.968	.968	'967	'967	'967	'967	'967	'967	.967	1
3	2.810	2.809	2.800	1.903	1,003	1.903	2.808	2.807	1'902	2.806	3
4	3.686	3.686	3.685	3.685	3.684	3.684	3.683	3.682	3.681	3.680	4
5											-
6	4.534	4°533 5°353	4.533	4.532	4.531	4.530	4.529	4.228	4.527	4.25	5 6
7	5°354	6.146	5°352 6°145	5.351	5.350	5°349	5°347 6°138	5°345 6°136	5.343	5'341	7
8	6.915	6.013	6.912	6.910	6.908	6.905	6.903	6.899	6.896	6.892	8
9	7.657	7.655	7.653	7.650	7.648	7.645	7.641	7.637	7.633	7.628	9
10	8.374	8.372	8.369	8.367	8.363		8.355	8.350	8.344	8.338	10
1	9.068	9.066	9.062	9.059	9.054	9.020	9.044	9.038	9.032	9.024	1
2	9.739	9.736	9.732	9'727	9.722		9'710	9.703	9.695	9.686	2
3	10'388	10.384	10.379	10.374	10.368		10.323	10'345	10,332	10,352	3
4	11.012	11,010	11.004		10,001	10.083	10'974	10.964	10.953	10'941	4
15	11.621	11.615	11.608		11.293	11.283	11.273	11.261	11.249	11.232	15
В	12.500	12,100	12,105	_	12'174	15,163	12,121	12,138	12'124	15,108	6
7	12.772	12.764	12.755	12'745	12'734	12'722	12.708	12.604	12.677	12.660	7
8	13.318	13.309	13.500		13.275	13.561	13'246	13.550	13,511	13'192	8
9	13.845	13.835	13.823	13.811	13.797	13.781	13.764	13.746	13.726	13.704	9
20	14'354	14'343	14.330	14'316	14.300	14.283	14.264	14'243	14'221	14'197	20
1	14.845	14.833	14.818	14.802	14.785	14.766	14'745	14'722	14.698	14.671	1
2	15.320	15.302	15.289			15'231	15.208	15.183	15.124	15.128	2
3	15.777	15.461	15.743	15.724	15.703		15.654	15.627	15.208	15.266	3
4	16'218	16'200	19,181	16,160		16,111	16'084	16.024	16,055	15.088	4
25	16.643	16.623	16.603	16.579	16.554	16.26	16'497	16.465	16.430	16.394	25
6	17.052	17.031	17'008	16.983	16.956	16.926	16.894	16.859	16.822	16.783	6
7	17.447	17.424	17'399	17:372	17'342	17.310	17'276	17.238	17'199	17'156	7
8	17.827	17.802	17.775	17.746	17.714	17.679	17.642	17.602	17.260	17'514	8
9	18,193	18,199	18.134	18,102	18.041	18.034	17'994	17.952	17.906	17.858	9
30	18.545	18.216	18.485	18.451	18.414	18.375	18.332	18.287	18.238	18.189	30
1	18.884	18.853	18.819	18'783	18.744	18.702	18.656	18.608	18.226	18.201	1
2	19,500	19.149	19.140	19.105	19.090	19.012	18.967	18.919	18.891	18.803	2
3	19.23	19.487	19.449	19°408	19.363	19.316	19.562	19.510	19.125	10.080	3
4	19.823	19.786	19.745	19.701	19.654	19.603	19.249	19,491	19.430	19.364	4
35	50,115	20'072	20'029	19.983	19'933	19.879	19.822	19,460	19.695	19.626	35
6	20,380	20.347	20,301	20°252	20,199	20'142	20.085	20.014	19.948	19.875	6
7	20.622	20,610	20.262	20,210	20.454	20.394	50,330	20,565	50,180	20,115	7
8	20'910	20'862	20'811	20.756	20.698	20'634	20.264	20'495	20'418	20.337	8
9	21.124	21.104	21.020	20.992	20.030	20.863	20.492	20.419	20.636	20.220	9
40	21.387				21,121	21.081	21.004	20.927	20.842	20.425	40
1	21.611	21.222	21,492			21.580	21,510	21'127	21.038	20'943	1
2	21.824	21.765	21.702		21.263	21.486	21'403	21.319	21,356	21.153	2
3 4	22.028	_	21.000	_	21.754	21.840	21.286	21.494	21.206	21,721	3 4
		22.124	22.088		21'934	21.849	21.759	21'662	21.260	21,421	_
45	22.407	22.339	22.266		22.102	22'016	21'921	21.821	21'713	21.238	45 6
8 7	22.283	22.212	22°435	22'354	22.77	22'174	22.012	21.069 51.069	21.857	21.238	7
8	22,008	22.675	22.595	22.210	22.419	22'322	22'353	22,538	51,001	21.086	8
9	23'058	22.976	22.889		22.697	22.591	22.478	22.320	22.535	22'097	9
	3 3 3 3	- 713									
	10	II	12	13	14	15	16	17	18	19	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	20	21	22	23	24	25	26	27	28	29	Dura-
tion.	22.705	22.481	22.252	22.019	21.781	21.539	21.292	21.041	20.786	20.527	tion.
0	.000	.000	,000	.000	.000	.000	*000	.000	.000	.000	0
1	'967	'967	'967	.967	•966	.966		.966	'966	.965	1
2	1,005	1,001	1,001	1,001	1,000	1,000	1.899	1.898	1.898	1.897	2
3	2.806	2.802	2.804	2.803	2.803	2.801	2.800	2.799	2.797	2.796	3
4	3.679	3.678	3.676	3.675	3.673	3.671	3.670	3.667	3.665	3.663	4
5	4.2 ■ 3	4.21	4.219	4.217	4.214	4.215	4.200	4.206	4.203	4'499	5
6	5'339	5:336	5'333	5.330	5.326	5.353	5.319	5.314	5.310	5.302	6
7	6.127	6.883	6.119	6.112	6.110	6.102	6.100	6.094	6.088	6.082	7
8 9	6.888	7.616	6.878	6·872 7·603	6.866	6.860 7.588	6.853	6.846	6.838	6.830	8
					7.596		7.579	7.570	7.261	7.551	9
10	8.332	8:324	8.316	8.308	8.299	8:289	8.279	8.268	8.257	8.245	10
1	9.016	9.007	8·998 9·655	8.988	8.977	8.965	8.953	8.940	8.927	8.912	1
3	9.677	9.666	10,580	9.643	9.630	9.617	9.602	9.287	9.571	9.555	2 3
4	10'928	10.305	10.899	10.883	10.866	10.848	10.829	10.800	10,188	10'172	4
			1					-		10.766	
15	11,250	11.204	11.487	11.469	11.450	11.429	11,408	11.382	11,361	11.336	15
6	12.001	12'073	12.024	12.033	12'011	11.088	11.964	11,030	11,015	11.884	6
8	12'641	12.021	12.299	12.276	12.22	12.226	12,499	12'470	12'441	12'410	7
9	13.170	13.148	13.124	13.008	13.21	13.239	13.209	13.471	12.048	12.302	8
			,				1		13'435	13.397	
20	14.171	14'143	14'114	14.083	14.020	14.016	13.980	13'941	13'902	13.860	20
1	14.643	14.613	14.281	14.247	14.211	14'473	14.434	14.392	14.348	14'302	1
3	15.097	15.064	15.029	14'992	14'953	14'912	15.586	14.823	14.776	14.726	2 3
4	15'533	15.913	15.459	15.419	15.377	15'332	15.685	15.631	15.182	15.131	4
				,						15.217	
25	16.324	16.999	16.648	16.222	16.173	16.480	16.066	16.000	15.949	15.885	25
6 7	17'111	17.063	17.012	16.928	16.901	16.842	16.779	16.369	16.304	16.236	6
8	17.466	17.414	17.360	17'302	17.242	17.178	17'110	17'039	16.965	16.886	8
9	17.806	17.751	17.693	17.631	17.267	17.498	17.426	17.320	17'270	17.186	9
30	18.131	18.073	18.011	17'945	17.876	17.803	17.727	17.646			30
1	18.442	18.380	18.314	18.245	18.171	18.003	18.013	17.926	17.835	17.470	1
2	18.740	18.674	18.604	18.230	18.452	18.369	18.585	18.101	18.004	17'992	2
3	19'023	18.953	18.879	18.801	18.718	18.631	18.239	18.441	18.338	18.530	3
4	19'294	19.550	19'141	19.058	18.971	18.878	18.780	18.677	18.268	18.453	4
35	19.552	19'473	19.390	19'303	19'210	10,115	10,008	18.899	18.784	18.663	35
8	19.797	19'714	19.626	19.534	19'436	19,335	19'223	10,108	18.986	18.858	8
7	20'029	19'942	19'850	19.752	19.649	19.239	19'424	19'303	19'175	19.039	7
8	20'250	20.158	20.061	19.958	19.849	19.734	19.613	19.485	19.320	19.208	8
9	20.459	20.362	20.260	20.121	20.037	19.916	19.789	19.654	19.212	19.363	9
40	20.656	20.554	20.447	20.333	20,513	20.086	19.952	19.811	19.662	19.206	40
1	20.842	20.732	20.622	20.203	20'377	20'244	20.104	19.956	19.800	19.636	1
2	21,019	20.002	20.787	20.662	20.230	20'390	20.244	20.089	19.927	19.756	2
3	21,180	21.064	20.940	20.809	20.671	20.256	20'372	20,311	20'042	19.863	3
4	21.334	21,515	21.083	20.946	20.803	20.620	20.490	20.322	20.146	19.960	4
45	21.477	21.320	21.212	21'072	20.922	20.764	20.294	20'422	20'239	20.047	45
8	21.611	21.478	21'337	21.189	21.032	20.867	20.695	20.213	20.323	20'124	6
7	21.734	21.596	21.449	21.295	21,135	20,061	20.782	20'594	20.398	20.195	7
8	21.848	21.705	21.225	21.392	51,553	21.046	20.860	20.666	20,463	20.521	8
9	21,623	21.804	21.646	21.479	21,302	21,151	20.930	20.429	20.250	20,303	9
	20	21	22	23	24	25	26	27	28	29	
				-3	-4	-5		-/		-9	

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VALUES OF TEMPORARY ANNUITIES OF 1

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Dura-	30	31	32	33	34	35	36	37	38	39	Dura-
tion.	20.264	19:996	19.725	19:449	19:169	18.885	18.596	18:303	18.004	17.702	tion.
0	.000	.000	.000	0000	.000	,000	.000	000	•000	.000	0
1	.965	'965	.962	.964	'964	'964	.963	.963	•963	.962	1
2	1.896	1.896	1.892	1.894	1.893	1.802	1.801	1.890	1.880	1.888	2
3	2.794	2.793	2'791	2.790	2.488	2.786	2.484	2.485	2.481	2.778	3
4	3.661	3.628	3.656	3.623	3.620	3.647	3.644	3.641	3:638	3.634	4
5	4.496	4'492	4.488	4'484	4.480	4.476	4.471	4°466	4.461	4.456	5
6	5'300	5°295	5.290	5.284	5.278	5.273	5'266	5°260	5.253	5'245	6
7	6.075	6.069	6.065	6.024	6.047	6.039	6.030	6.055	6.013	6.003	7
8	6.822	6.813	6.804	6.795	6.785	6.775	6.765	6'754	6.742	6.729	8
9	7.541	7.230	7.219	7.202	7.496	7.483	7.470	7°456	7.441	7.426	9
10	8.232	8.220	8.206	8.192	8.178	8.165	8.146	8'129	8.115	8.093	10
1	8.898	8.883	8.867	8.850	8.833	8.814	8.795	8.775	8.754	8.731	1
2	9.538	9.20	9.201	9°481	9.461	9.440	9.417	9.393	9.368	9.341	2
3	10.123	10'132	10,110	10.088	10.064	10.039	10,013	9.985	9.956	9.925	3
4	10'743	10.720	10.692	10.669	10.642	10.613	10.283	10.221	10.214	10.481	4
15	11.311	11.284	11.256	11.556	11'195	11.163	11.158	11'092	11.023	11'012	15
6	11.855	11.825	11.433	11.760	11°725	11.688	11.649	11.608	11.264	11'517	6
7	12'377	12'344	12.308	12.51	12.535	12'190	12.146	12'100	12.021	11.998	7
8	12.878	12.840	12.801	12'759	12'716	12.669	12.620	12.268	12.213	12.454	8
9	13'357	13.316	13.272	13.55	13.177	13.156	13.072	13.014	12.953	12.887	9
20	13.816	13.770	13.722	13.671	13.618	13'561	13.201	13'437	13'369	13.297	20
1	14.255	14.502	14'152	14.096	14.037	13.975	13,000	13.838	13.764	13.684	1
2	14.674	14.619	14.261	14.200	14'436	14.368	14'295	14'218	14'136	14.048	2
3	15.074	15'014	14.951	14.885	14.815	14.740	14.661	14.577	14°488	14.392	3
4	15.455	15.391	15,355	15.520	15.174	15.003	15.007	14.915	14.818	14.714	4
25	15.819	15.749	15.675	15.296	15.214	15.426	15.333	15.234	15.158	15.012	25
6	16.164	16:088	19.009	15'924	15.835	15.740	15.639	15.234	15.418	15'297	6
7	16.492	16.411	16.352	16'234	19.138	16.036	15'927	12.813	15.689	15.228	7
8	16.803	16.419	16.623	16.226	16.422	16,313	19.199	16.072	15.041	15.801	8
9	17.097	17.004	16.905	16.800	16.690	16.272	16.447	16'315	16.14	16.025	9
30	17.376	17.276	17.170	17.058	16.040	16.815	16.681	16.240	16.390	16.530	30
1	17.638	17.231	17.419	17.299	17.173	17.040	16.898	16.747	16.288	16.419	1
2	17.885	17.771	17.651	17.299	17.390	17.249	17.098	16.938	16.770	16.200	2
3	18.119	17'996	17.868	17.734	17.592	17.441	17.585	17.113	16.935	16.746	3
4	18,333	18.502	18.070	17.928	17.777	17.619	17.450	17'273	17.084	16.886	4
35	18.232	18.400	18.258	18.102	17.948	17.781	17.603	17.416	17.219	17.011	35
6	18.723	18.281	18.430	18.272	18.102	17 701	17'742	17.546	17.339	17.122	6
7	18.897	18.747	18.289	18.422	18.247	18.065	17.867	17.662	17.446	17.220	7
8	19.028	18.901	18.735	18.260	18.376	18.183	17'979	17.765	17.541	17.305	8
9	19.500	19'041	18.867	18.684	18.492	18,500	18.078	17.856	17.623	17.379	9
40	-					18.386	18.162	17.935	17.694	17.442	40
1	19°342	19'169	18.987	18.896	18.688	18.470	18.241	18.003	17.755	17.496	1
2	19 405	19'389	19'192	18.982	18.769	18.244	18.307	18.062	17.807	17.541	2
3	19.677	19 389	19 192	19.063	18.840	18.607	18.364	18.115	17.850	17.578	3
4	19.767	19.564	19.323	19.135	18.901	18.662	18.412	18.123	17.885	17.608	4
45	19.847	19.637	19'419	10,101	18.954	18.708	18.452	18.188	17'914	17.632	45
6	19'917	19.701	19.476	19 191	18.998	18.746	18.485	18.512	17.938	17.651	6
7	19'979	19.756	19.525	19.584	19.036	18.778	18.212	18.538	17.956	17.665	7
8	20'032	19.803	19.266	19'320	10.000	18.804	18.233	18.255	17.970	17.677	8
9	20'077	19.843	10,601	19,320	10,001	18.825	18.220	18.269	17.980	17.685	9
	30	31	32	33	34	35	36	37	38	39	

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	08 tion. 00 0 1 2 2 3 3 4 7 5 6 5 7 7 8 8
17-394 17-081 16-764 16-144 16-114 15-782 15-144 15-164 14-757 14-757 14-757 14-757 14-757 14-757 15-757 1	00 0 0 0 1 1 2 2 4 4 7 3 3 5 4 4 7 5 6 5 5 7 3 9 8
1 '962 '962 '961 '961 '960 '960 '959 '958 '958 '958 2 1'887 1'886 1'884 1'883 1'882 1'880 1'878 1'877 1'874 1'874 3 2'776 2'774 2'771 2'768 2'766 2'762 2'759 2'755 2'751 2'7 4 3'630 3'626 3'622 3'617 3'613 3'607 3'602 3'595 3'589 3'589 5 4'450 4'444 4'438 4'431 4'424 4'416 4'407 4'398 4'388 4'38 6 5'237 5'229 5'220 5'211 5'201 5'189 5'177 5'164 5'150 5'17 7 5'992 5'981 5'969 5'957 5'943 5'928 5'912 5'895 5'876 5'8 8 6'716 6'702 6'686 6'670 6'653 6'633 6'613<	57 1 72 2 47 3 81 4 77 5 65 7 89 8
2 1.887 1.886 1.884 1.883 1.882 1.880 1.878 1.877 1.874 1.874 1.874 3 2.776 2.776 2.776 2.768 2.766 2.762 2.762 2.759 2.755 2.751 2.75 4 3.630 3.626 3.622 3.617 3.613 3.607 3.602 3.595 3.589 3.589 5 4.450 4.444 4.438 4.431 4.424 4.416 4.407 4.398 4.388 4.38 6 5.237 5.229 5.220 5.211 5.201 5.189 5.177 5.164 5.150 5.150 7 5.992 5.981 5.969 5.957 5.943 5.928 5.912 5.895 5.876 5.8 8 6.716 6.702 6.686 6.670 6.653 6.633 6.613 6.590 6.566 6.5 9 7.409 7.391 7.372 7.352 7.330 7.306 7.280 7.252 7.221 7.2 10 8.072 8.051 8.027 8.002 7.975 7.946 7.914 7.880 7.843 7.843	72 2 47 3 31 4 77 5 35 6 75 7 89 8
3 2.776 2.774 2.771 2.768 2.766 2.762 2.759 2.755 2.751 2.76 4 3.630 3.626 3.622 3.617 3.613 3.607 3.602 3.595 3.589 3.5 5 4.450 4.444 4.438 4.431 4.424 4.416 4.407 4.398 4.388 4.3 6 5.237 5.229 5.220 5.211 5.201 5.189 5.177 5.164 5.150 5.150 7 5.992 5.981 5.969 5.957 5.943 5.928 5.912 5.895 5.876 5.86 8 6.716 6.702 6.686 6.670 6.653 6.633 6.613 6.590 6.566 6.5 9 7.409 7.391 7.372 7.352 7.330 7.306 7.280 7.252 7.221 7.2 10 8.072 8.051 8.027 8.002 7.975 7.946 7.914 7.880 7.843 7.8	3 4 4 77 5 6 55 7 8 8
4 3.630 3.626 3.622 3.617 3.613 3.607 3.602 3.595 3.589 3.589 5 4.450 4.444 4.438 4.431 4.424 4.416 4.407 4.398 4.388 4.388 6 5.237 5.229 5.220 5.211 5.201 5.189 5.177 5.164 5.150 5.150 7 5.992 5.981 5.969 5.957 5.943 5.928 5.912 5.895 5.876 5.8 8 6.716 6.702 6.686 6.670 6.653 6.633 6.613 6.590 6.566 6.5 9 7.409 7.391 7.372 7.352 7.330 7.306 7.280 7.252 7.221 7.2 10 8.072 8.051 8.027 8.002 7.975 7.946 7.914 7.880 7.843 7.8	31 4 77 5 35 6 55 7 89 8
5 4'450 4'444 4'438 4'431 4'424 4'416 4'407 4'398 4'388 4'3 6 5'237 5'229 5'220 5'211 5'201 5'189 5'177 5'164 5'150 5'150 7 5'992 5'981 5'969 5'957 5'943 5'928 5'912 5'895 5'876 5'8 8 6'716 6'702 6'686 6'670 6'653 6'633 6'613 6'590 6'566 6'3 9 7'409 7'391 7'372 7'352 7'330 7'306 7'280 7'252 7'221 7'3 10 8'072 8'051 8'027 8'002 7'975 7'946 7'914 7'880 7'843 7'8	77 5 35 6 55 7 39 8
6 5.237 5.229 5.220 5.211 5.201 5.189 5.177 5.164 5.150 5.75 7 5.992 5.981 5.969 5.957 5.943 5.928 5.912 5.895 5.876 5.8 8 6.716 6.702 6.686 6.670 6.653 6.633 6.613 6.590 6.566 6.56 9 7.409 7.391 7.372 7.352 7.330 7.306 7.280 7.252 7.221 7.311 10 8.072 8.051 8.027 8.002 7.975 7.946 7.914 7.880 7.843 7.843	35 6 55 7 39 8
6 5.237 5.229 5.220 5.211 5.201 5.189 5.177 5.164 5.150 5.75 7 5.992 5.981 5.969 5.957 5.943 5.928 5.912 5.895 5.876 5.8 8 6.716 6.702 6.686 6.670 6.653 6.633 6.613 6.590 6.566 6.5 9 7.409 7.391 7.372 7.352 7.330 7.306 7.280 7.252 7.221 7.3 10 8.072 8.051 8.027 8.002 7.975 7.946 7.914 7.880 7.843 7.8	35 6 55 7 39 8
7 5 992 5 981 5 969 5 957 5 943 5 928 5 912 5 895 5 876 5 8 8 6 716 6 702 6 686 6 6070 6 653 6 633 6 613 6 590 6 566 6 9 9 7 409 7 391 7 372 7 352 7 330 7 306 7 280 7 252 7 221 7 30 10 8 072 8 051 8 027 8 002 7 975 7 946 7 914 7 880 7 843 7 8	55 7 39 8
8 6·716 6·702 6·686 6·670 6·653 6·633 6·613 6·590 6·566 6·3 9 7·409 7·391 7·372 7·352 7·330 7·306 7·280 7·252 7·221 7·3 10 8·072 8·051 8·027 8·002 7·975 7·946 7·914 7·880 7·843 7·8	39 8
9 7.409 7.391 7.372 7.352 7.330 7.306 7.280 7.252 7.221 7.3 10 8.072 8.051 8.027 8.002 7.975 7.946 7.914 7.880 7.843 7.8	
10 8.072 8.051 8.027 8.002 7.975 7.946 7.914 7.880 7.843 7.8	0
	02 10
2 9'312 9'282 9'249 9'213 9'175 9'133 9'088 9'039 8'987 8'9	
3 9.891 9.855 9.816 9.775 9.730 9.681 9.629 9.572 9.511 9.74 10.442 10.401 10.356 10.308 10.256 10.200 10.140 10.074 10.004 9.95 9.811 9.75 9.7	
15 10'967 10'920 10'869 10'814 10'755 10'690 10'622 10'547 10'466 10'	
8 11,464 11,413 11,322 11,533 11,559 11,53 11,022 10,330 10,830 10,8	
7 11.941 11.880 11.815 11.745 11.669 11.288 11.200 11.402 11.303 11.	
8 12.391 15.353 15.540 15.141 15.084 11.006 11.808 11.405 11.640 11.	-
9 12.816 13.41 13.629 13.241 15.241 15.251 15.241 15.251 15.251 11.8	
20 13.518 13.132 13.042 15.049 15.849 15.489 15.489 15.349	01 20
1 13.204 13.206 13.404 13.301 13.188 13.062 12.032 15.404 15.644	84 1
2 13.954 13.853 13.745 13.630 13.506 13.373 13.231 13.078 12.915 12.7	41 2
3 14.586 14.126 14.061 13.036 13.801 13.056 13.205 13.337 13.161 15.0	73 3
4 14.602 14.483 14.352 14.510 14.074 13.017 13.251 13.523 13.384 13.	84 4
25 14.894 14.766 14.628 14.481 14.324 14.156 13.978 13.787 13.585 13.3	71 25
6 15.166 12.054 14.846 14.451 14.523 14.343 14.183 13.080 13.462	
7 15.418 15.269 15.110 14.942 14.762 14.270 14.367 14.122 13.924 13.0	o
8 15.651 15.492 15.322 15.142 14.951 14.747 14.533 14.305 14.065 13.8	
9 15.865 15.695 15.515 15.324 15.121 14.906 14.679 14.439 14.187 13.6	·
30 16'061 15'881 15'689 15'487 15'273 15'047 14'808 14'557 14'294 14'6	
1 16'239 16'048 15'846 15'633 15'408 15'171 14'921 14'659 14'385 14'6 2 16'400 16'199 15'987 15'763 15'527 15'279 15'019 14'746 14'462 14'1	
3 16.246 16.332 16.115 12.844 12.931 12.345 12.105 14.455 14.556	
4 16.642 16.424 16.555 12.12.044 12.425 12.425 12.425 14.525	
6 16.893 17.652 16.401 16.138 15.863 15.577 15.281 14.974 14.657 14.	
7 16'981 16'732 16'472 16'200 15'918 15'624 15'321 15'007 14'684 14'; 8 17'058 16'801 16'532 16'253 15'963 15'662 15'353 15'033 14'705 14';	
40 17.180 16.907 16.624 16.331 16.029 15.717 15.397 15.068 14.733 14.	
1 17.226 16.947 16.658 16.359 16.052 15.735 15.411 15.080 14.741 14.	
2 17.265 16.979 16.685 16.381 16.070 15.749 15.422 15.088 14.747 14.6	
3 17'296 17'006 16'706 16'399 16'083 15'760 15'430 15'093 14'751 14'2	
7 3 2 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3 7 3	
45 17.341 17.042 16.735 16.421 16.100 12.772 12.439 12.100 14.755 14.7	
6 17.326 14.024 19.444 19.458 19.102 12.441 12.101 14.429 14.4	
7 17.367 17.062 16.750 16.433 16.100 12.778 12.443 12.102 14.757 14.7	_
8 17.376 17.069 16.755 16.436 16.111 15.780 15.444 15.103 14.757 14.7	
17.382 17.043 16.438 16.115 12 12.444 12.103 14.421 14.4	9
40 41 42 43 44 45 46 47 48 4	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

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VALUES OF TEMPORARY ANNUITIES OF 1

U	VALUES OF TEMPORARY ANNUITIES OF							DD OF	1	0	CENT.
Dura:	50	51	52	53	54	55	56	57	58	59	Dura-
tion.	14.054	13.697	13:336	12.973	12.607	12.239	11.869	11.498	11.127	10.755	tion.
0	.000	.000	000	*000	.000	.000	000	.000	000	000	0
1	.956	955	'954	'953	952	.021	'950	·948	947	945	1
2	1.870	1.867	1.864	1.861	1.828	1.854	1.820	1.846	1.841	1.836	2
3	2.742	2.737	2.431	2.725	2.718	2.410	2.702	2.694	2.684	2.673	3
4	3.573	3.262	3°555	3.545	3.533	3.21	3.208	3.493	3°477	3.460	4
5	4.365	4°352	4.338	4.322	4°305	4.287	4.267	4.245	4°222	4'196	5
6 7	5.118	5,100	5.080	5.028	5.034	5.688	4.081	4°951 5°612	4.018	4.882	6 7
8	5.833	5.809 6.480	5.782 6.446	5°753 6°409	5°722 6°369	6.322	5.651	6.558	5.268	6.113	8
9	6.211 7.123	7.114	7.071	7.025	6.976	6.922	6.864	6.801	6.733	6.660	9
10	7.759	7.711	7.660	7.604	7.544	7.479	7.408	7°333	7.251	7.162	10
1	8.330	8.274	8.515	8.146	8.074	7.996	7'913	7.823	7.727	7.622	1
2	8.868	8.801	8.729	8.651	8.267	8.476	8.379	8.274	8.165	8.041	2
3	9'373	9'295	9'212	9,151	9.024	8.919	8.807	8.687	8.559	8.421	3
4	9.845	9.756	9.660	9.557	9.446	9.327	9,199	9.063	8.918	8.762	4
15	10.586	10.182	10.076	9.959	9.834	9'700	9.556	9.404	9.241	9.067	15
6	10.696	10.285	10.460		10.189	10.039	9.880	9.710	9.230	9.339	в
7	11.076	10.949	10.813	10.667	10'512	10'347	10'171	9.984	9.787	9.577	7
8	11.426	11.586	11,139	10.976	10.802	10.623	10.431	10.227	10.013	9.786	8
9	11.749	11.292	11.430	11.525	11.008	10.871	10.665	10.442	10'210	9.966	9
20	12.044	11.876	11.697	11.209	11.304	11,001	10,866	10.659	10.381	10,151	20
1	12,313	15,131	11'937	11.431	11.213	11.584	11'043	10.431	10.224	10,52	1
2	12.226	12.360	15,121	11.030	11.698	11.453	11.194	10.930	10.621	10.361	2
3	12.775	12.265	12'341	12'106	11.859	11,000	11.329	11.047	10.755	10.452	3
4	12.971	12.747	12.209	12.260	11.998	11.725	11.440	11.142	10.840	10.222	4
25	13'145	12.907	12.656	12.392	12'117	11.831	11.234	11'227	10,010	10.284	25 6
6 7	13.500	13.168	12.482	12.200	12,318	11'920	11.611	11,505	11,000	10.630	7
8	13.433	13.272	12.983	12.683	12,303	11.023	11.723	11.345	11.043	10.693	8
9	13.648	13.329	13.000	12'749	12,429	12,100	11.763	11.419	11.068	10'713	9
30	13.731	13'433	13.153	12.804	12.475	12.138	11.793	11.443	11.087	10.727	30
1	13.802	13'494	13.172	12.847	15.210	12.164	11.816	11.461	11,101	10.737	1
2	13.860	13.243	13.519	15.881	12.238	12.188	11.833	11'474	11,110	10.744	2
3	13.907	13.282	13.249		12.228	12.204	11.845	11'483	11'117	10.748	3
4	13'945	13.613	13'274	12.927	12.574	12.519	11.854	11.489	11,151	10.421	4
35	13.974	13.637	13.293	12'941	12.585	12'224	11.860	11'493	11'124	10.753	35
6	13'997	13.655	13.307	12.952	12.593	12.530	11.863	11.495	11.122	10.754	6
7	14.014	13.669	13'317	12.959	12.298	12,533	11.866	11.497	11,159	10.754	7
8	14.027	13.678	13.324	12.964		12.536	11.867	11.498	11.122	10.755	8
9	14.036	13.685	13.358	12.968		12'237	11.868	11.498	11.152	10.755	9
40		13.690		12.970		12.238	11.869	11'498	11'127	10.755	40
1	14.047					12.538		11.498		10.755	1 2
2	14.020		13.335			12.538		11'498	11'127	10.755	3
3 4	14.025	13.696	13.335	12.972		12.539	11.869	11,408	11'127	10.755	
	14.023	13.696	13,336	12'972	12.606		11.869	11.498	58		
45	14.054	13.697	13,330		12.606		11.869	57		50	
7	14.024		13,336	1	12.000		11 009		51	14.054	
8	14.024	1	13,336		12.607	-39		52	13.697		
8	14.054	13.697	13.336	12.973	1			13.336		14.024	52
									13.697	14.024	1
								13.336	13.697	14'054	50
	50	51	52	53	54	55	56	52	51	50	
	1										

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	60	61	62	63	64	65	66	67	68	69 .	Dura-
tion.	10.384	10.013	9.644	9.277	8.913	8.551	8:194	7.840	7.491	7.148	tion.
0	.000	.000	.000	.000	*000	.000	,000	*000	.000	.000	0
1	. 943	.941	.938	.936	.933	.030	927	'923	.919	'915	1
2	1.830	1.823	1.814	1.809	1.801	1'792	1.783	1.772	1.761	1.749	2
3	2.665	2.650	2.636	2.622	2.606	2.288	2.240	2°549	2.224	2'503	3
4	3°441	3'421	3,388	3°374	3.348	3.350	3,500	3.257	3,551	3,183	4
5	4.168	4.138	4.102	4.040	4.031	3,000	3.945	3.897	3.846	3.790	5
6	4.844	4.802	4.757	4.709	4.656	4.600	4.539	4.474	4.404	4.330	6
7 8	5.471	5'416	5°357 5°906	5°294 5°826	5.225	5.640	5.074	4.990	4.900	4.802	7 8
9	6 . 581	5°980 6°497	6.406	6.309	5.741	6.094	5°552 5°976	5°448 5°851	5.337	5.220	9
10	7.068	6.967	6.859	6.743	6.620	6'489	6.320	6.503	6'049	5°579 5°886	10
1	7.211	7.393	7.266	7°131	6.988	6.837	6.677	6.203	6.331	6.147	1
2	7.913	7.776	7.631	7.476	7.313	7.140	6.959	6.769	6.221	6.365	2
3	8.274	8.119	7.954	7.780	7.596	7.403	7.201	6.990	6.771	6.244	3
4	8.598	8.423	8.239	8.045	7.841	7.628	7.406	7.175	6.936	6.691	4
15	8.885	8.691	8.488	8.275	8.021	7.819	7.577	7.328	7.071	6.808	15
6	9°137	8.925	8.703	8.471	8.229	7.978	7.719	7.452	7.178	6.900	6
7	9.328	9.128	8.888	8.638	8.378	8.110	7.834	7.551	7.263	6.970	7
8	9.249	9.305	9.044	8.777	8.201	8.512	7.926	7.629	7.328	7.024	8
9	9.413	9'449	9.172	8.893	8.601	8.305	7.998	7.689	7.377	7.064	9
20	9.821	9'571	9.283	8.985	8.680	8.370	8.024	7.735	7.414	7.092	20
1	9.967	9.673	9.370	9.060	8.743	8.422	8.096	7.769	7.440	7'112	1
2	10,063	9.755	9°440	9,110	8.792	8.461	8.127	7.793	7.458	7.15	2
3	10'141	9.821	9'496	9.164	8.828	8.490	8.120	7.810	7.471	7'134	3
4	10.503	9.873	9.238	9,198	8.855	8.211	8.162	7.821	7.479	7'140	4
25	10'252	9,013	9.570	9.223	8.875	8.525	8.176	7.829	7.484	7'143	25
6	10.580	9'943	9.594	9.242	8.888	8·535 8·541	8.183	7 ^{.8} 33 7 ^{.8} 36	7°487 7°489	7'145	6 7
8	10,339	9.982	9.623	9.254	8.904	8.246	8.100	7.838	7'490	7.146	8
9	10.324	9,993	9.631	9.269	8.907	8.248	8.195	7.839	7.490	7.147	9
30	10.362	10,001	9.636	9.272	8.910	8.220	8.193	7.839	7.491	7.148	30
1	10'372	10,009	9.640	9.275	8.911	8.220	8.193	7.840	7.491	7'148	1
2	10.377	10,000	9.642	9.276	8.912	8.221	8.193	7.840	7.491	7.148	2
3	10.380	10,011	9.643	9.277	8.912	8.221	8.193	7.840	7'491	7.148	3
4	10.381	10.013	9.644	9.277	8.913	8.221	8.193	7.840	7.491	69	
35	10.385	10,013	9.644	9'277	8.913	8.221	8.193	7.840	68	40	
6	10.383	10,013	9.644	9.277	8.913	8.221	8.194	67	41	40	
7	10,383	10.013	9.644	9.277	8.913	8.221	66	42		17:394	
8 9	10.383	10,013	9.644	9.277	8.913	65	43	42	17.081	17'394	62
	10.384	10,013	9.644	9°277 63	64	44		16.764	17.081	17'394	1
40	10.384	10,013	9°644 62	- 00	45		16.441	16.764		17'394	60
2	10'384	61	-02	46		16.114	16.441	16.764		17'394	59
_	60		47	15.445	15.782	16.114	16.441	16.764		17'394	8
		48	15.104	10 440	15.482	16.114	16.441	16.763	17.081	17.394	7
	49	14.757		15.445		16.114	16.441	16.763		17.394	6
	14.408	_	12,104		15.782	16.114	16.441	16.763	17.081	17.393	5
-		14.757	15'104	15.445	15.782	16.114	16.441	16.763	17.080	17'393	54
53 2	14.408	14.757	15.104			16.114	16'441	16.763	17.080	17'392	3
1	14.408	14.757	15'104	15.445	15.781	16'114	16.441	16.762	17.078	17.391	2
50	14,408	14.757	15,103	15'445	15.481	16.113	16.439	16.760	17.076	17.386	50
	49	48	47	46	45	44	43	42	41	40	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	70	71	72	73	74	75	76	77	78	79	Dura-
tion.	6.810	6:479	6.154	5.836	5.526	5.224	4.930	4.645	4.368	4.101	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	.911	.906	.000	*894	.888	.881	.873	.865	.856	.847	1
2	1.735	1'721	1.705	1.688	1.670	1.650	1.629	1.606	1.282	1.222	2
3 4	2.478	2.450	2°420 3°050	2.388	2°353 2°944	2.316	2.276	2'234	2.188	2.140	3 4
5	3'141	3.097	3,230	3.27	3°450	3.369	3.583	3,191	3.096	2.995	5
6	4.250	4.162	4'075	3.980	3.879	3'773	3.661	3'544	3.421	3'294	6
7	4.704	4.296	4.483	4.363	4.537	4.106	3.968	3.826	3.677	3.25	7
8	5.096	4.965	4.828	4.684	4.533	4°377	4.512	4.047	3.875	3.699	8
9	5°432	5.278	2.119	4.948	4.774	4.594	4.408	4.518	4.024	3.858	9
10	5.416	5.539	5°355	2,163	4.966	4.764	4.557	4°347	4°134	3,050	10
1 2	5°954	5.755	5.248	5.336	2.118	4.896	4.670	4,442	4.513	3.985	1
3	6,311	5.030 6.040	5°7°3 5°825	5.471	5°234	4°995 5°068	4°753 4°813	4°511 4°559	4°269	4°029	$\begin{vmatrix} 2 \\ 3 \end{vmatrix}$
4	6.438	6.181	2,010	5°575 5°654	5°323 5°388	2,151	4.855	4.233	4'331	4.076	4
15	6.239	6.266	5,000	5.412	5.434	5.128	4.883	4.613	4'347	4.087	15
6	6.616	6.330	6.042	5°754	5.467	5.183	4.902	4.626	4.357	4.094	6
7	6.675	6.378	6.080	5.483	5.490	2,199	4.914	4.635	4.362	4.097	7
8	6.718	6.415	6.106	5.803	5.204	5.510	4.021	4.639	4.362	4.099	8
9	6.749	6.436	6.154	5.816	5.213	2,519	4.922	4.642	4.367	4°100	9
20	6.771	6.452	6.136	5.825	5.219	5.550	4.928	4.644	4.368	4'101	20
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	6:786	6:463	6'144	5.830	5.22	5.222	4.929	4.644 4.645	4°368 4°368	4'101	$\frac{1}{2}$
3	6.802	6.469	6.148	5.833 5.834	5°524 5°525	5.223	4.930	4.645	4.368	4'101	3
4	6.802	6.476	6.123	5.835	5.26	5.224	4.930	4.645	4.368	79	
25	6.807	6.477	6.123	5.836	5.26	5.224	4.930	4.645	78		
6	6.809	6.478	6.123	5.836	5.26	5.224	4.930	77	-	30	
7	6.809	6.478	6.124	5.836	5.26	5.224	76		31	20.264	
8	6.810	6.478	6.124	5.836	5.26	75		32	19.996	20.264	72
9	6.810	6.478	6.124	5.836	74	34	33	19.725	19.996	20.564	1
30	6.810 6.810	6.479	6.124	73	35		19.449	19.725	19.996	20.264	70
2	6.810	6.479	72	36		19.169	19.449	19.725	19.996	20.264	69
	70		37		18.885	19.169	19.449	19.725	19.996	20.264	8
		38	18.303	18.596	18.885	19,160	19.449	19.725	19.996	20.564	7
	39	18:004		18.596		19'169	19.449	19.725	19,096	20.264	6
	17.702		18.303	18.296	18.885	10,160	19'449	19.725	10.000	20.263	5
63		18.004	18.303	18.296		10,100	19'449	19.725	1 0 ,000	20.263	3
2	17.702	18.004	18.303	18.296	18.885	10,160	19 449	19723	19 990	20.565	2
1	17.702	18.004	18.303	18.296	0 00	19,169	19.448	19'724	19.995	20.260	1
60	17.702	18.004	18.303	18.596		19.160			19.993	20.528	60
59	17.700	18.004	18.302	18.595		10,168	19.447	19.722	10.001	20.526	59
8	17.702	18.004	18.302	18.595	18.884		19.446	19'719	19.988	20.521	8
7	17.702	18.004	18.302	18.292	18.883	10,169	19.443	19.716	19.984	20.242	7 6
6 5	17.701	18.003	18.301	18.203	18.881	19.100	19'440	19.712	19.978	20.238	5
54	17.701	18.003	18.300	18,280	18.875	19'155	19'429	19,697	19'959	20.513	54
3	17.699	18.001	18.500	18.286	18.870	19133	19'429	19.686	19'944	50.100	3
2	17.697	17.998	18.505	18.280	18.863	19.139	19.408	19.671	19.926	20.172	2
1	17.695	17.994	18.287	18.573	18.854	19.127	19.393	19.652	19,004	20.148	1
50	17.691	17.988	18.279	18.263	18.841	10,111	19.374	19.629	19.877	50,110	50
	39	38	37	36	35	34	33	32	31	30	
	,	1									-

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VALUES OF TEMPORARY ANNUITIES OF 1

3 PER

											CENT.
Dura-	80	81	82	83	84	85	86	87	88	89	Dura-
tion.	3.843	3.595	3.356	3.127	2:907	2.697	2.498	2.307	2.127	1.956	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	.836	.825	.813	.800	.786	.771	755	.738	'720	.700	1
2	1'527	1'496	1'464	1'429	1.393	1.324	1'312	1.560		1.176	2
3	2.088	2.033	1.976	1.012	1.851	1.483	1.713	1.641	1.262	1.488	3
4	2.237	2°456	2.370	2,581	2.188	2.093	1.994	1.893	1.790	1.686	4
5	2.890	2.781	2.668	2.225	2.432		2.182			1.807	5
6			2.888		2.602	2'309	_	2.059	1,033		
7	3'163	3.027)	2.746		2.456	2'310	2,164	2,050	1.877	6
8	3.369	3,500	3.047	2.882	2.414	2.223	2.389	2°228	2.070	1.012	7
9	3.20	3,339	3'157	2.975	2.793	2.014	2,438	2°266	2.099	1.937	8
	3.629	3,431	3,535	3.036	2.841	2.621	2.466	2.586	2,114	1,948	9
10	3.406	3'493	3.585	3.04	2.871	2.673	2.483	2°297	2'121	1.953	10
1	3.758	3.233	3,313	3.008	2.888	2.682	2.490	2.303	2'125	1.955	1
2	3.792	3.229	3'332	3.111	2.898	2.592	2.494	2.300	2'126	1.956	2
3	3.814	3'575	3.344	3'119	2.003	2.695	2.496	2.304	2'127	1.956	3
4	3.827	3.284	3.320	3,153	2.905	2.696	2.497	2.307	2.122	89	
15	3.835	3.289	3.323	3,152	2.906	_	2.498	2'307	88		
6	3.839	3.292	3.355	3.156	2.907		2.498	87		20	
7	3.841		3°355				86		21	22.50	
8		3.593	1	3.150	2.907	2.697 85		22		22.705	
9	3.842	3'594	3.356	3'127	2.907	85	23		22.481	22.705	82
		3°594	3.356	3.122	84	24		22.252	22.481	22.705	1
20	3.843	3.255	3.326	83	25		22.019	22.222	22°481	22.705	80
1	3.843	3.595	82	26	25	21.781	22.010		22,481	22.705	79
2	3.843	81	07	20	21.539		1	22.222			
	80	-0	27	21.292		21.481	22,010	22.252	22.481	22.705	8
		28	21.041		21.239	21.781	22,010	22.222		22.402	7
	29	20.786		21,535	21,239	21.481	22,010	22,525	22.481	22.404	6
	20.527		21.041	21,595	21.238	21.481	22,010	22,52	22.480	22.404	5
		20.786	21.041	21.595	21.238	21.481	22.019	22.252	22.480	22.704	74
73	20.22	20.786	21.041	21.595	21.238	21.781	22'019	22.221	22.480	22.704	3
2	20.22	20.786	21'041	21.292	21.238	21'781	22.018	22.221	22.480	22'703	2
1	20.22	20.786	21'041	21.202	21.238	21.781	22.018	22.221		22.702	1
70	20.22	20.786	21'041	21.292	21.238	21.780	22.018	22'250	22.478	22.701	70
69	20.22	20.786	21.041	21,505	21.238	21.480	22.012	22.249	22.477	22.699	69
8		20.786	21'041	_			· ·			22.696	8
7	20.22	20.786		21,301	21.237	21.779	22.019	22.248	22.475	-	7
	20°527		21.041	21,501	21.237	21.778	22,012	22.246	22'471	22.692	
6	20.256	20.786	21.040	21.500	21.236	21.777	22'012	22.242	22.467	22.686	6
5	20.256	20.785	21,039	21.589	21.234	21.774	22,000	22.538	22,461	22.679	5
64	20.256	20.784		21.588	21'532	21.771	22'004	22,535	22.454	22.669	64
3	20,222	20.783	21,039	21.582	21.258	21.766	21.998	22.234	22.444	22.657	3
2	20.254	20.781	21.034	51,581	21.23	21.400	21.990	22.514	22'431	22.641	2
1	20.252	20.779	21.030	21.276	21.216	21.751	21'979	22,301	22.415	22.622	1
60	20.219		21'025		21.208	21'740	21.966	22.184	22.396	22.600	60
59	20.212	20.769	21.018	21.260	21.496	21.726	21'949	22.164	22.372	22.572	59
8	20°509	20.762	21.008	21.548	21.482	21.709	21.928	22'140	22°344	22.240	8
7	20.201	20'752	20.996	21,533	21.464	21.687	21,005	22'110	22'310	22,202	7
6							21.872				
	20'491	20.739	20'980	21,512	21'441	21.661	21 072	22.076	22'271	22.459	6
5	20°478	20'723	20.961	51,101	21,414	21.630	21.836	22.032	22,559	22°409	5
54	20.461	20.703	20'937	21,163	21.385	21.293	21.795	51,089	22.142	22.352	54
3	20.441	20.678	20.008	21,130	21.344	21.249	21.747	21.935	55.119	22,588	3
2	20°415	20.648	20.873	21,000	21.599	21.200	21.691	21.875	22.020	22'217	2
1	20.384	20.915	20.832	21.044	21'247	21,442	21.629	21.807	21.976	22,138	1
50	20.347	20.240	20.784	20.991	21.188	21.378	21.228	21.731	21.892	22.020	50
		28	27	26				22	21	20	
	29	20	4/	20	25	24	23	44	21	20	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	90	91	92	93	94	95	96	97	98	99	Dura-
tion.	1.794	1.643	1.497	1.365	1.236	1.122	.1.000	·917	•826	•703	tion.
0	'000	.000	.000	.000	000	.000	.000	.000	.000	,000	0
1	.679	.658	.633	.610	.583	.558	.526	.502	'485	453	1
2	1.152	1'074	1,050	'966	.908	.852	.791	.746	705	.642	2
3	1.408	1.328	1.242	1.162	1.079	1,000	.919	.856	797	.703	3
4	1.281	1.476	1.371	1.569	1.162	1.072	977	1902	.826	99	
				-					98		
5	1.681	1.229	1'437	1,355	1'207	1.104	1,001	.917		10	
6	1.434	1.603	1'470	1'347	1,520	1,118	1,000	97	II		
7	1.767	1.625	1.486	1.320	1'234	1,155	96	72		24.669	
8	1.482	1.635	1,493	1.364	1,539	95	72	12	24.496	24.669	92
9	1.489	1.040	1.496	1.362	94	7.4	13	24:317	211106		1
10	1'792	1.642	1.497	93		14	24.133		24.496	24.669	90
1	1'794	1.643	92		15	23.945		24.314	24.496	24.669	_
2	1'794	91		16	23.751		24'133	24'317	24.496	24.669	89
	90		17	23.552		23'945	24'133	24'317	24 496	24.669	8
		18	20.047	20 002	23'751	23'945	24.133	24.317	24.496	24.669	7
	19	20.100	23.347	23.252	23.751	23'945	24°133	24.317	24'496	24.669	6
		23.138	23'347	23.252	23'751	23'945	24°133	24'317	24.496	24.669	5
	22.924	23.138	23.347	23.552	23.751	23'945	24°133	24'317	24°496	24.669	84
83	22.924	23.138	23'347	23.252	23.751	23'945	24'133	24'317	24.495	24.669	3
2	22.924	23.138	23'347	23.22	23.750	23.945	24.133	24.317	24'495	24.669	2
1	22.024	53,138	23'347	23.221	23.750	23.945	24'133	24.316	24'495	24.668	1
80	22,024	23.138	23'347	23.221	23.750	23'944	24.133	24.316	24.494	24.667	80
1		23.138			23.750	23'944	24.135	24.312	24.493	24.666	79
79	22.924		23'347	23.221	0.0				24 493	24.663	8
8	22.024	23.138	23'347	23.221	23.750	23.944	24'132			24.660	7
7	22,024	23.138	23'347	23.221	23.749	23.943	24'130	24'312	24.489	24.656	6
6	22,054	23.138	23'347	23.220	23.748	23'942	24'129		24.486		5
5	22,053	23.134	23.346	23.249	23.747	23'940	24,150	24.304	24.482	24.651	
74	22.053	23.132	23°345	23.248	23.746	23.938	24,153	24.303	24.477	24.644	74
3	22.022	23.139	23.344	23.246	23'743	23'934	24,113	24.597	24.469	24.635	3
2	22,051	53,132	23.345	23.244	23.739	23,959	24,113	24.500	24.460	24.624	2
1	22.920	23'133	23'339	23.240	23.735	23.923	24'105	24.580	24.449	24.611	1
70	22,018	23.130	23.336	23.232	23.728	23.912	24.092	24.268	24.435	24.294	70
69	22'915	23,156	23.330	23.529	23'720	23.902	24.083	24.254	24.418	24.575	69
8	22'911	23.151	23'324	23'520	23'710	23.893	24.068	24.236	24'398	24.22	8
7	22.906	23'114	23'315	23.200	23.697	23.877	24.020	24.512	24'374	24.252	7
6	22.899	23'105	23.304	23.496	23'681	23.859	24.029	24'191	24.346	24.493	6
5	22.889	23'093	23'290	23'479	23.662	23.836	24.003	24.105	24,313	24.457	5
64	22.877	23.079	23'273	23'459	23.638		23'973	24.158	24.276	24'417	64
3	22.863	23.001	23.525	23.436	23.611	23.779	23.939	24.000	24.535	24'371	3
2	22.844	23.040	23.552	23.407	23.579	23.743	23.899	24.047	24.187	24.320	2
1	22.822	23.014	53.108	23'374	23.242		23.854	23.998	24'134	24.263	1
60	22.796	22.084	23.164	23.336	23.200	23.656	23.804	23.943	24.076	24.200	60
59	22.765		23.15	23.293	23.452	23.604		23.883	24.011	24'131	59
8	22.728				23,308	23.242	23.685	23.815	23.939	24.056	8
7	22.686	22.862	23.020	23.187	23.338	23.481	23.612	23.742	23.865	23.974	7
6	22.638	1	23.029	23.152		23.409			23.777	23.882	6
5						53,330	23.456		23.682	23.790	5
	22.283	22.749	22.906	23.020	23.197				23.286	23.687	54
54	22.231	22.682	22.835	22.979	23.112	23.544	23.366				3
3	22.452	22.608	22.756	22.895	23'027				23.480	23.576	2
2	22.376		22.669	22.803					23.366	23'459	1
1	22,501	22.436	22.574	22.403	22.825				23.544	23.333	50
50	55,108	-,				22.823			23.114	23,133	-00
	19	18	17	16	15	14	13	12	II	10	1

O^{M}

 $3\frac{1}{2}$ PER CENT.

CONSTANTS.

Constant.	Number.	Logarithm.
i $(1+i)$ $(1+i)^{\frac{1}{2}}$	°035 1°035 1°017 349 5	2·544 068 0 0·014 940 3 0·007 470 2
$(1+i)^{\frac{1}{4}}$ v $v^{\frac{1}{2}}$ $v^{\frac{1}{4}}$ d δ	1.008 637 4 -966 183 6 -982 946 4 -991 436 5 -033 816 4 -034 401 4	0.003 735 1 1.985 059 7 1.992 529 8 1.996 264 9 2.529 127 7 2.536 576 5

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COMMUTATION TABLE

 3^{1}_{2} PER CENT.

æ	D_x	N.	S_x	C_x	\mathbf{M}_x	R_x	x
10 11 12 13 14	70 892 68 263 65 730 63 288 60 934 58 665	1 658 426 1 587 534 1 519 271 1 453 541 1 390 253 1 329 319	32 454 390 30 795 964 29 208 430 27 689 159 26 235 618 24 845 365	231°51 225°01 219°32 213°75 208°31	14 810'00 14 578'49 14 353'48 14 134'16 13 920'41	560 935.86 546 125.86 531 547.37 517 193.89 503 059.73 489 139.32	10 11 12 13 14
16 17 18 19	56 477 54 367 52 331 50 368	1 270 654 1 214 177 1 159 810 1 107 479	23 516 046 22 245 392 21 031 215 19 871 405	200'04 197'04 193'50 190'98	13 507 94 13 307 90 13 110 86 12 917 36	475 427 22 461 919 28 448 611 38 435 500 52	16 17 18 19
20 21 22 23 24	48 474 46 646 44 880 43 176 41 530	1 057 111 1 008 637 961 991 917 111 873 935	18 763 926 17 706 815 16 698 178 15 736 187 14 819 076	189°37 187°66 186°75 186°13	12 726·38 12 537·01 12 349·35 12 162·60 11 976·47	422 583°16 409 856°78 397 319°77 384 970°42 372 807°82	20 21 22 23 24
25 26 27 28 29	39 940 38 403 36 919 35 484 34 097	832 405 792 465 754 062 717 143 681 659	13 945 141 13 112 736 12 320 271 11 566 209 10 849 066	185.61 185.66 186.63 186.59	11 790'71 11 605'10 11 419'44 11 232'81 11 046'22	360 831.35 349 040.64 337 435.54 326 016.10 314 783.29	25 26 27 28 29
30 31 32 33 34	32 757 31 461 30 209 28 998 27 827	647 562 614 805 583 344 553 135 524 137	10 167 407 9 519 845 8 905 040 8 321 696 7 768 561	188'30 188'58 189'27 189'70 189'88	10 858.82 10 670.52 10 481.94 10 292.67 10 102.97	303 737°07 292 878°25 282 207°73 271 725°79 261 433°12	30 31 32 33 34
35 36 37 38 39	26 696 25 603 24 547 23 526 22 540	496 310 469 614 444 011 419 464 395 938	7 244 424 6 748 114 6 278 500 5 834 489 5 415 025	190.42 190.70 190.27 190.95	9 913'09 9 722'67 9 531'97 9 341'22 9 150'65	251 330'15 241 417'06 231 694'39 222 162'42 212 821'20	35 36 37 38 39
40 41 42 43 44	21 587 20 666 19 776 18 916 18 085	373 398 351 811 331 145 311 369 292 453	5 019 087 4 645 689 4 293 878 3 962 733 3 651 364	190.83 190.98 191.49 191.49	8 959.70 8 768.87 8 577.89 8 386.53 8 195.04	203 670.55 194 710.85 185 941.98 177 364.09 168 977.56	40 41 42 43 44
45 46 47 48 49	17 281 16 504 15 753 15 026 14 322	274 368 257 087 240 583 224 830 209 804	3 358 911 3 084 543 2 827 456 2 586 873 2 362 043	192.52 193.36 194.30 195.33 196.78	8 003.01 7 810.49 7 617.13 7 422.83 7 227.50	160 782.52 152 779.51 144 969.02 137 351.89 129 929.06	45 46 47 48 49
50 51 52 53 54	13 641 12 982 12 343 11 723 11 123	195 482 181 841 168 859 156 516 144 793	2 152 239 1 956 757 1 774 916 1 606 057 1 449 541	198°26 200°08 201°87 203°78 206°09	7 030.72 6 832.46 6 632.38 6 430.51 6 226.73	122 701.56 115 670.84 108 838.38 102 206.00 95 775.49	50 51 52 53 54

OM

COMMUTATION TABLE

 $3^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

_				1	,		
x	D_x	\mathbb{N}_x	S_x	\mathbf{C}_{x}	\mathbf{M}_x	R_x	x
55	10 541.	133 670'	1 304 748*	208.30	6 020.64	89 548.76	55
56	9 976'1	123 129'4	1 171 077 9	210'54	5 812.34	83 528 12	56
57	9 428.2	113 153.3	1 047 948.5	212'94	5 601.80	77 715.78	57
58	8 896.4	103 725°1	934 795'2	215.33	5 388.86	72 113.98	58
59	8 380.3	94 828.7	831 070'1	217.69	5 173.53	66 725.12	59
60	7879°2	86 448 4	736 241.4	219.78	4 955.84	61 551.29	60
61	7 393.0	78 569.2	649 793'0	221.85	4 736.06	56 595.75	61
62	6 921.1	71 176°2	571 223.8	223.59	4 514'24	51 859.69	62
63	6 463.5	64 255'1	500 047.6	224.99	4 290.65	47 345 45	63
64	6 019 9	57 791'6	435 792°5	226.04	4 065.66	43 054.80	64
65	5 590°3	51 771.7	378 000.9	226.66	3 839.62	38 989.14	65
66	5 174.6	46 181'4	326 229.5	226.28	3 612.06	35 149 52	66
67	4 773'1	41 006.8	280 047 8	225'95	3 386.38	31 536.26	67
68	4 385.7	36 233 7	239 041 0	224°55	3 160.43	28 120.18	68
69	4012.8	31 848.0	202 807.3	222.36	2 935.88	24 989.75	69
			· · · · · · · · · · · · · · · · · · ·				
70	3 654.8	27 835.2	170 959'3	219°18	2 713.22	22 053.87	70
71	3 312.0	24 180'4	143 124°1	215,13	2 494*34	19 340.35	71
72	2 984 9	20 868.4	118 943.7	209'97	2 279'21	16 846 01	72
73	2 674.0	17 883.5	98 075.3	203.89	2 069.24	14 566.80	73
74	2 379 7	15 209.5	80 191,8	196.24	1 865.35	12 497.56	74
75	2 102'7	12 829 8	64 982.3	188.51	1 668.81	10 632,51	75
76	1 843'4	10 727'1	52 152.5	178.87	1 480.60	8 963.40	76
77	1 605,1	8 883.7	41 425'4	168.45	1 301.73	7 482 80	77
78	1 379'5	7 281.6	32 541'7	157°21	1 133.58	6 181.07	78
79	1 175.7	5 902'1	25 260'1	145'19	976.07	5 047 79	79
80	990'71	4 726.35	19 357 97	132.22	830.88	4071'72	80
81	824.69	3 735.64	14 631 62	119'52	698:36	3 240.84	81
82	677.28	2 910 95	10 895'98	106.52	578.84	2 542.48	82
83	548.10	2 233.67	7 985.03	93.061	472.268	1 963.642	83
84	436.21	1 685.24	5 751.36	80,185	379'507	1 491.074	84
				_			
85	341.22	1 249.06	4 065.79	67.880	299'315	1 111:567	85
86	262.13	907.21	2816.73	56.257	231°435	812.252	86
87	197.00	645*38	1 909'22	45.684	175°178	580.817	87
88	144.66	448.38	1 263.84	36,185	129.494	405.639	88
89	103.28	303.45	815.46	27.903	93,315	276.145	89
90	72°177	200.138	511.738	20'973	65°409	182.833	90
91	48.763	127.961	311,600	15.198	44.436	117.424	91
92	31,916	79.198	183.639	10.458	29.238	72.988	92
93	20.100	47.282	104°441	7.2121	18.2103	43.750 3	93
94	12.217	27.173	57°159	4.421 6	11.508 5	25°240 0	94
95	7.082 4	14.955 7	29.9858	2'906 4	6.576 6	13.941 8	95
96	3.936 5	7.873 3	15,030 1	1.41 7	3.670 2	7.365 2	
97	2,061 6	3.936 8	7.1268	.961 6	1.928 5	3.695 0	
98	1.030 3	1.875 2	3.550 0	497 7	.966 9	1.766 5	
99	*497 7	.844 9	1.344 8	256 5	469 2	.799 6	
100	*224 4				2127	*330 4	
101		°347 2 °122 8	°499 9	123 9	·088 8	*117 7	
102	°092 9		°152 7	°059 9 °028 9	0000	028 9	102
102	*029 9	*029 9	029 9	020 9	020 9	020 9	102

 0^{M} logarithms and co-logarithms of D_x , N_x , C_x , M_x $3^{\frac{1}{2}}_{2}$ cent.

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x	$\log \mathrm{D}_x$	$\log N_x$	$\log C_x$	$\log M_x$	$\operatorname{col} \operatorname{D}_x$	col N _x	$\operatorname{col} \mathbf{C}_x$	$\operatorname{col} \mathrm{M}_x$	x
10 11 12 13 14 15 16 17	4.850 60 .834 19 .817 76 .801 32 .784 86 .768 38 .751 87 .735 33	6'219 70 '200 72 '181 63 '162 43 '143 10 '123 63 '104 03 '084 28	2'364 57 '352 19 '341 07 '329 91 '318 72 '309 96 '301 11 '294 55	4'170 56 '163 71 '156 96 '150 27 '143 65 '137 10 '130 59 '124 11	5 149 40 165 81 182 24 198 68 215 14 231 62 248 13 264 67	7·780 30 ·799 28 ·818 37 ·837 57 ·856 90 ·876 37 ·895 97 ·915 72	3.635 43 .647 81 .658 93 .670 09 .681 28 .690 04 .698 89 .705 45	5·829 44 ·836 29 ·843 04 ·849 73 ·856 35 ·862 90 ·869 41 ·875 89	10 11 12 13 14 15 16 17
18 19 20 21 22 23	718 76 702 16 685 51 668 81 652 06 635 24	°064 38 °044 33 °024 12 °003 73 5'983 17 °962 42	286 68 280 98 277 32 273 37 271 27 269 82	'117 63 '111 18 '104 71 '098 19 '091 64 '085 03	'281 24 '297 84 '314 49 '331 19 '347 94 '364 76	935 62 955 67 975 88 996 27 6 016 83	713 32 719 02 722 68 726 63 728 73 730 18	*882 37 *888 82 *895 29 *901 81 *908 36 *914 97	18 19 20 21 22 23
24 25 26 27 28	618 36 601 40 584 37 567 25 550 03	'941 48 '920 34 '898 98 '877 41 '855 60	268 96 268 61 268 71 270 98 270 88	°078 33 °071 54 °064 65 °057 65 °050 49	381 64 398 60 415 63 432 75 449 97	°058 52 °079 66 °101 02 °122 59 °144 40	731 04 731 39 731 29 729 02 729 12	921 67 928 46 935 35 942 35 949 51	24 25 26 27 28
30 31 32 33 34	'532 72 '515 30 '497 77 '480 13 '462 36 '444 47	833 57 811 28 788 74 765 92 742 84 719 45	272 78 274 84 275 49 277 08 278 07 278 49	'043 22 '035 78 '028 19 '020 44 '012 53 '004 45	'467 28 '484 70 '502 23 '519 87 '537 64 '555 53	'166 43 '188 72 '211 26 '234 08 '257 16 '280 55	'727 22 '725 16 '724 51 '722 92 '721 93 '721 51	956 78 964 22 971 81 979 56 987 47 995 55	30 31 32 33 34
35 36 37 38 39	'426 45 '408 30 '389 99 '371 55 '352 95	695 75 671 74 647 39 622 69 597 63	'279 71 '280 35 '280 46 '280 05 '280 91	3.996 21 .987 79 .979 18 .970 40 .961 45	573 55 591 70 610 01 628 45 647 05	304 25 328 26 352 61 377 31 402 37	'720 29 '719 65 '719 54 '719 95 '719 09	4°003 79 °012 21 °020 82 °029 60 °038 55	35 36 37 38 39
40 41 42 43 44 45	334 18 315 25 296 14 276 83 257 31	572 17 546 31 520 02 493 28 466 06	'280 65 '280 99 '281 84 '282 14 '283 37 '284 48	'952 29 '942 95 '933 38 '923 58 '913 55	'665 82 '684 75 '703 86 '723 17 '742 69	427 83 453 69 479 98 506 72 533 94 561 66	719 35 719 01 718 16 717 86 716 63	°047 71 °057 05 °066 62 °076 42 °086 45 °096 75	40 41 42 43 44
46 47 48 49 50	237 57 217 59 197 36 176 84 156 01	43° 34 °41° 08 °381° 27 °351° 85 °321° 81	204 48 286 36 288 47 290 76 293 98	'903 25 '892 68 '881 79 '870 57 '858 99	.762 43 .782 41 .802 64 .823 16 .843 99	589 92 ·618 73 ·648 15 ·678 19 ·708 90	715 52 713 64 711 53 709 24 706 02 702 77	107 32 118 21 129 43 141 01	45 46 47 48 49 50
51 52 53 54	'113 33 '091 41 '069 05 '046 23	'259 69 '227 53 '194 56 '160 75	'301 20 '305 07 '309 16 '314 05	·834 58 ·821 67 ·808 24 ·794 26	*886 67 *908 59 *930 95 *953 77	740 31 772 47 805 44 839 25	698 80 694 93 690 84 685 95	165 42 178 33 191 76 205 74	51 52 53 54

OM LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x $3\frac{1}{2}$ per logarithms.

x	$\log \mathrm{D}_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathbf{M}_x$	$\begin{bmatrix} x \end{bmatrix}$
55 56	3.008 06 3.008 06	5.126 03	2.318 68	3.779 64 .764 35	5'977 12 4'001 04	6.873 97	3.681 32 .676 67	4.220 36	55 56
57 58	974 43	°053 67	*328 25 *333 10	748 33	°025 57 °050 78	946 33	'671 75 '666 90	°251 67 °268 50	57 58
59	949 22	4.976 94	333 84	731 50	076 74	5.023 06	'662 16	286 22	59
60	·896 48	•936 76	'341 98	.695 11	103 52	·063 24	658 02	304 89	60
61	.868 82 .840 18	*895 25 *852 33	*346 00 *349 46	675 42 654 58	131 18	104 75	650 54	'324 58 '345 42	61 62
63	810 47	807 91	349 40	632 53	189 53	192 09	647 83	*367 47	63
64	'779 59	.761 87	'354 19	.609 13	'220 41	'238 13	.645 81	*390 87	64
65	747 44	°714 09 °664 46	355 37	*584 29	°252 56 °286 12	285 91	644 63	415 71	65 66
66	'713 88 '678 80	612 86	355 21 354 01	557 86 529 74	321 20	335 54	644 79 645 99	'442 14 '470 26	67
68	642 04	.259 11	351 31	499 75	357 96	.440 89	648 69	.200 25	68
69	'603 45	.203 08	°347 °5	46774	*396 55	·496 92	652 95	532 26	69
70 71	°562 86	'444 59 '383 46	'340 81 '332 70	'433 53 '396 96	'437 14 '479 91	.616 54	659 19	°566 47	70 71
72	474 93	319 49	332 70	357 78	*525 07	.680 51	677 85	642 22	72
73	427 16	*252 45	'309 39	.31281	572 84	'747 55	'690 61	.684 19	73
74	376 52	182 12	293 44	'270 76	623 48	'817 88	706 56	729 24	74
75 76	'322 77 '265 61	'108 22 '030 48	°274 64	'222 40 '170 44	677 23 734 39	'891 7 8	725 36	'777 60 '829 56	75 76
77	204 70	3.948 59	*226 47	11452	795 30	4.021 41	773 53	*885 48	77
78 79	139 72	.862 23	196 47	'054 34	'860 28	137 77	'803 53 '838 06	3.010 52	78 79
80	2.995 94	674 53	161 94	2·989 48 '919 54	'929 72 3°004 06	325 47	.877 73	°080 46	80
81	916 29	572 36	077 44	·844 o8	.083 71	427 64	922 56	155 92	81
82	.830 77	'464 04	'026 42	762 56	'169 23	535.96	_ '973 58	'237 44	82
83 84	'738 86 '639 99	°349 02 °226 75	1.968 77	674 47	°261 14 '360 01	°650 98	2.031 23	'325 53 '420 78	83 84
85	533 46	•096 58	'831 74	476 13	'466 54	903 42	'168 26	.523 87	85
86	'418 51	2.957 85	'750 18	364 43	·581 49	3.042 12	1249 82	635 57	86
87	294 47	'809 82	659 76	'243 48	·705 53	190 18	340 24	·756 52 ·887 75	87 88
88	°160 34	'651 65 '482 47	°558 49	1 969 94	·839 66 ·984 71	'348 35 '517 53	554 35	5.030 06	89
90	1.858 40	301 33	321 67	.815 64	2·141 60	.698 67	678 33	·184 36	90
91	.688 09	107 07	181 79	647 74	.311 91	-892 93	818 21	352 26	91
92 93	°504 01	1.898 71	030 50	°465 95	495 99 696 61	325 30	1.141 04	°534 °5	92 93
94	086 97	434 14	674 09	.023 01	913 03	.565 86	325 91	946 99	94
95	0.820 18	17481	'463 35	0.818.00	ī·149 82	.825 19	.536 65	1.185 00	95
96 97	314 21	°595 14	1.983 00	°564 69	°404 89 °685 79	7.103 84	0'017 00	435 31	96 97
98	012 97	273 05	697 00	1.982 38	987 03	726 95	.303 00	0'014 62	98
99	1.697 00	1.926 81	'409 06	671 36	0.303 00	c'073 19	590 94	*328 64	99
100	351 06	.540 58	.093 08	327 77	.648 94	459 42	906 92	672 23	100
101 102	2.968 15 .476 08	·089 20 2·476 08	2.777 11 .461 14	2·948 41 •461 14	1.031 85	910 80	1,538 86	1.021 20 .238 86	101 102
	1,,,,,,	1,75	14	7-1-4	3-3 3-	3 3 7-	30	30	

 0^{M}

VALUES OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x $3\frac{1}{2}$ per cent.

v	a_x	A_x	P_x	\overline{a}_x	$\overline{\mathrm{A}}_x$	$\overline{\mathrm{P}}_x$	x
10	22'393	*20 891	*00 893	22.890	·21 255	'00 929	10
11	22'256	*21 356	*00 918	22.753	·21 726	'00 955	11
12	22'114	*21 837	*00 945	22.611	·22 215	'00 982	12
13	21'967	*22 333	*00 972	22.464	·22 721	'01 011	13
14	21'816	*22 845	*01 001	22.313	·23 240	'01 042	14
15	21.660	'23 373	*01 032	22°157	23 777	'01 073 '01 106 '01 141 '01 177 '01 214	15
16	21.499	'23 918	*01 063	21°996	24 331		16
17	21.333	'24 478	*01 096	21°830	24 902		17
18	21.163	'25 054	*01 130	21°660	25 487		18
19	20.987	'25 646	*01 166	21°484	26 092		19
20	20.808	*26 254	'01 204	21.305	26 708	'01 254 '01 295 '01 337 '01 382 '01 428	20
21	20.623	*26 877	'01 243	21.120	27 344		21
22	20.434	*27 516	'01 284	20.931	27 994		22
23	20.241	*28 170	'01 326	20.238	28 658		23
24	20.044	*28 838	'01 370	20.241	29 336		24
25 26 27 28 29	19.842 19.635 19.425 19.211 18.992	'29 522 '30 219 '30 931 '31 656 '32 397	'01 416 '01 464 '01 514 '01 566 '01 620	20°339 20°132 19°922 19°708 19°489	'30 031 '30 743 '31 465 '32 202 '32 955	'01 477 '01 527 '01 579 '01 634 '01 691	25 26 27 28 29
30	18.769	'33 150	°01 677	19.266	'33 722	°01 750	30
31	18.542	'33 917	°01 736	19.039	'34 503	°01 812	31
32	18.311	'34 698	°01 797	18.808	'35 298	°01 877	32
33	18.075	'35 495	°01 861	18.572	'36 110	°01 944	33
34	17.835	'36 306	°01 928	18.332	'36 935	°02 015	34
35	17.591	'37 133	'01 997	18.088	37 775	°02 088	35
36	17.342	'37 974	'02 070	17.839	38 631	°02 166	36
37	17.088	'38 832	'02 147	17.584	39 509	°02 247	37
38	16.830	'39 705	'02 227	17.326	40 396	°02 332	38
39	16.566	'40 598	'02 311	17.062	41 304	°02 421	39
40	16.298	'41 506	°02 400	16'794	'42 226 '43 169 '44 129 '45 106 '46 100	°02 514	40
41	16.024	'42 433	°02 492	16'520		°02 613	41
42	15.745	'43 375	°02 590	16'241		°02 717	42
43	15.461	'44 335	°02 693	15'957		°02 827	43
44	15.172	'45 315	°02 802	15'668		°02 942	44
45	14.877	'46 311	°02 917	15.373	'47 115	°03 065	45
46	14.577	'47 325	°03 038	15.073	'48 147	°03 194	46
47	14.272	'48 354	°03 166	14.768	'49 196	°03 331	47
48	13.963	'49 400	°03 302	14.459	'50 259	°03 476	48
49	13.649	'50 464	°03 445	14.145	'51 339	°03 629	49
50 51 52 53 54	13.330 13.008 15.681 15.321	'51 541 '52 632 '53 735 '54 852 '55 980	°03 597 °03 757 °03 928 °04 109 °04 300	13.826 13.504 13.177 12.847 12.513	52 437 53 544 54 669 55 804 56 953	°03 793 °03 965 °04 149 °04 344 °04 552	50 51 52 53 54
	1		1				

WHOLE-LIFE PARTICIPATING ASSURANCES

MALE LIVES

OM

VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x

 $\frac{1}{2}$ PER

				1	1		
x	a_x	A_x	P_x	\overline{a}_x	$\overline{\mathbf{A}}_x$	$\overline{\mathrm{P}}_x$	x
55 56 57 58	11.681	*57 116 *58 263 *59 416	°04 504 °04 721 °04 951	12°176 11°838 11°496 11°154	*58 113 *59 276 *60 452 *61 629	°04 773 °05 007 °05 259 °05 525	55 56 57 58
59	10.319	*60°573	°05 195 °05 456	10.811	62 809	. 02 810	59
60 61	9°972 9°627	•62 897 •64 062	°05 733 °06 028	10°467	.63 992 .65 179	•06 114 •06 439	60 61
62 63	9°284 8°941	.65 223 .66 383	·06 342 ·06 678	9°778 9°435	.66 361	.06 787 .07 158	62 63
64 65	8.600 8.261	·67 537 ·68 683	°07 035 °07 416	9°094 8°754	·68 715 ·69 883	°07 556	64 65
66 67	7°925 7°591	.69 820 .70 948	·07 823 ·08 258	8°418 8°084	'71 041 '72 189	*08 439 *08 930	66 67
68 69	7°262 6°937	.72 063 .73 163	.08 722 .09 218	7°754 7°429	.73 323 .74 444	°09 456	68 69
70 71	6.619	'74 245	°09 749	7'108	75 547 76 633	10 628 11 282	70 71
72	6'301 5'991	75 313 76 357	°10 316	6.482	.77 700	·11 986	72 73
73 74	2.9 88	77 384 78 386	°11 571 °12 264	6.140 2.881	78 745 79 767	°12 745 °13 563	74
75 76	5°102 4°819	79 365 80 321	°13 007 °13 803	5.308 2.201	·80 766 ·81 740	°14 446 °15 399	75 76
77 78	4°545 4°278	·81 249 ·82 152	°14 653 °15 564	5°033 4°766	·82 686 ·83 606	°16 429 °17 544	77 78
79 80	4°020 3°771	*83 023 *83 869	°16 538	4 · 506 4 · 256	·84 497 ·85 359	°18 751	79 80
81 82	3°53° 3°298	*84 682 *85 465	18 695 19 885	4°014 3°781	·86 191 ·86 993	°21 473 °23 008	81 82
83 84	3°075 2°861	*86 220 *86 942	21 157	3.557 3.342	·87 763 ·88 504	°24 673 °26 484	83 84
85 86	2.657 2.462	·87 633 ·88 292	•23 963	3°136 2°939	·89 212 ·89 889	·28 450 ·30 583	85 86
87 88	2°276 2°100	*88 922	°25 502 °27 143 °28 880	2.751	'90 5 35	'32 906 '35 427	87 88
89	1.932	·89 518 ·90 084	30 723	2°573 2°403	·91 733	·38 171	89
90 91	1.773	*90 623 *91 128	°32 682 °34 727	2°241	°92 289 °92 810	°41 173 °44 404	90 91
92 93	1,481	.01 600	°36 918	1.811	°93 769	°47 984 °51 769	92 93
94 95	1,224	.92 478 .92 858	°41 579	1.681 1.564	°94 218	°56 055 °60 478	94 95
96 97	,010 1,000	'93 235 '93 543	°46 615	1°449 1°354	.95 016 .95 343	.65 582 .70 431	96 97
98	·820 ·698	·93 845 ·94 267	·51 562 ·55 533	1.522	•95 668 •96 108	*75 969 *84 946	98 99
100	*547	94 779	·61 262	° 975	·96 645	•99 110	100 101
101 102	*322 *000	°95 556 °96 618	'72 312 '96 618	*744 *414	'97 442 '98 574	2.34 891	102

 0^{M}

LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x 3 cent.

x	$\log a_x$	$\log \Lambda_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\Lambda}_x$	$\log \overline{\mathrm{P}}_x$	x
10	1°369 10	ī*319 96	3.950 86	1'359 65	1.327 46	3.967 82	10
11	°366 53	*329 52	.962 99	'357 04	.336 98	.979 95	11
12	°363 87	*339 20	.975 33	'354 3 ²	.346 65	.992 32	12
13	°361 11	*348 95	.987 84	'351 49	.356 43	2.004 92	13
14	°358 24	*358 79	2.000 55	'348 56	.366 24	.017 66	14
15	'355 25	368 72	°013 47	'345 51	'376 16	°030 64	15
16	'352 16	378 72	°026 56	'342 34	'386 16	°043 79	16
17	'348 95	388 78	°039 83	'339 05	'396 23	°057 17	17
18	'345 62	398 87	°053 25	'335 66	'406 32	°070 67	18
19	'342 17	409 02	°066 85	'332 12	'416 51	°084 40	19
20	'338 61	'419 20	'080 59	328 48	'426 64	°098 16	20
21	'334 92	'429 38	'094 46	324 69	'436 86	°112 17	21
22	'331 11	'439 58	'108 47	320 79	'447 07	°126 29	22
23	'327 18	'449 79	'122 61	316 77	'457 25	°140 48	23
24	'323 12	'459 97	'136 85	312 62	'467 40	°154 79	24
25	'318 94	'470 14	151 20	'308 33	'477 57	169 23	25
26	'314 61	'480 28	165 67	'303 89	'487 75	183 87	26
27	'310 16	'490 40	180 24	'299 33	'497 83	198 49	27
28	'305 57	'500 46	194 89	'294 64	'507 88	213 23	28
29	'300 85	'510 50	209 65	'289 79	'517 92	228 14	29
30	295 98	'520 48	°224 50	*284 79	527 91	243 11	30
31	290 97	'530 42	°239 45	*279 64	537 86	258 21	31
32	285 79	'540 31	°254 52	*274 34	547 75	273 39	32
33	280 48	'550 17	°269 69	*268 86	557 63	288 76	33
34	274 98	'559 98	°285 00	*263 21	567 44	304 23	34
35	'269 30	°569 76	'300 46	*257 39	577 20	319 81	35
36	'263 44	°579 49	'316 05	*251 37	586 94	335 58	36
37	'257 40	°589 19	'331 79	*245 12	596 70	351 56	37
38	'251 14	°598 85	'347 71	*238 70	606 34	367 64	38
39	'244 68	°608 50	'363 82	*232 03	615 99	383 96	39
40	'237 99	'618 11	'380 12	*225 15	625 58	*400 43	40
41	'231 06	'627 70	'396 64	*218 01	635 17	*417 16	41
42	'223 88	'637 24	'413 36	*210 61	644 72	*434 11	42
43	'216 45	'646 75	'430 30	*202 95	654 23	*451 28	43
44	'208 75	'656 24	'447 49	*195 01	663 70	*468 69	44
45 46 47 48 49	°200 77 °192 49 °183 91 °175 01 °165 80	.665 68 .675 09 .684 43 .693 73 .702 98	'464 91 '482 60 '500 52 '518 7 2 '537 18	°186 76 °178 20 °169 32 °160 14 °150 60	.673 16 .682 57 .691 93 .701 21	'486 40 '504 36 '522 61 '541 08 '559 85	45 46 47 48 49
50	156 25	712 15	555 90	140 70	719 64	.578 94	50
51	146 36	721 25	574 89	130 46	728 71	.598 25	51
52	136 12	730 26	594 14	119 82	737 74	.617 92	52
53	125 51	739 19	613 68	108 80	746 67	.637 87	53
54	114 52	748 03	633 51	097 36	755 52	.658 15	54

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LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x $3\frac{1}{2}$ per cent.

				- 4,	01 002, 110		
x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathcal{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
55 56 57 58	1'103 15 '091 40 '079 24 '066 66	765 39 773 90 782 28	2.653 61 .673 99 .694 66 .715 62	1.085 50 .073 28 .060 55 .047 43	7.764 27 772 88 781 41 789 79	2.678 76 .699 59 .720 86 .742 36	55 56 57 58
59 60 61 62	°053 68 °040 28 °026 43 °012 15	790 52 798 63 806 60 814 40	'736 84 '758 35 '780 17 '802 25	°033 87 °019 82 °005 27 0°990 26	'798 02 '806 13 '814 11 '821 91	'764 15 '786 30 '808 84 '831 65	59 60 61 62
63 64 65	°997 44 °982 28 °966 65	*822 06 *829 54 *836 85	·824 62 ·847 26 ·870 20	°9.74 76 °958 75 °942 23	*829 57 *837 05 *844 37	*854 80 *878 30 *902 14	63 64 65
66 67 68 69	'950 58 '934 06 '917 07 '899 63	·843 98 ·850 94 ·857 71 ·864 29	'893 40 '916 88 '940 64 '964 66	*925 21 *907 64 *889 55 *870 92	*851 51 *858 47 *865 24 *871 83	'926 30 '950 83 '975 69 1'000 91	66 67 68 69
70 71 72 73 74	·881 73 ·863 37 ·844 56 ·825 29 ·805 60	·870 67 ·876 87 ·882 85 ·888 65 ·894 24	'988 94 1'013 50 '038 29 '063 36 '088 64	.851 75 .832 03 .811 74 .790 89 .769 48	'878 22 '884 42 '890 42 '896 22 '901 82	°026 45 °052 39 °078 67 °105 34 °132 36	70 71 72 73 74
75 76 77 78 79	785 45 764 87 743 89 722 51 700 73	'899 63 '904 83 '909 82 '914 62 '919 20	114 18 139 96 165 93 192 11	747 49 724 93 701 82 678 12	'907 23 '912 43 '917 43 '922 24 '926 84	159 75 187 49 215 61 244 13	75 76 77 78 79
80 81 82 83	.678 59 .656 07 .633 27 .610 16	°923 60 °927 79 °931 79 °935 61	245 01 271 72 298 52 325 45	.628 99 .603 58 .577 61 .551 08	'931 25 '935 46 '939 48 '943 31	'302 27 '331 89 '361 88 '392 22	80 81 82 83
84 85 86 87 88	586 76 563 12 539 34 515 35 491 31	'939 23 '942 67 '945 92 '949 01 '951 91	352 47 379 55 406 58 433 66 460 60	523 98 496 35 468 23 439 54 410 42	946 96 950 42 953 71 956 82	'422 98 '454 08 '485 48 '517 28 '549 33	84 85 86 87 88
90 91 92 93	*467 18 *442 93 *418 98 *394 70 *371 31	954 65 957 24 959 65 961 94 964 03	'487 47 '514 31 '540 67 '567 24 '592 72	380 79 350 54 320 17 288 83 257 99	.962 53 .965 15 .967 59 .969 93 .972 06	'581 73 '614 61 '647 42 '681 10 '714 07	90 91 92 93
94 95 96 97	347 17 324 63 301 05 280 93	966 04 967 82 969 58	618 87 643 19 668 53 690 08	237 99 225 52 194 38 161 01	'974 13 '975 97 '977 80 '979 29	748 61 781 60 816 79 847 76	94 95 96 97
98 99 100 101	°260 08 °229 81 °189 52	°972 41 °974 36 °976 71	'712 33 '744 55 '787 19	100 13 053 62 7.989 06	°980 77 °982 76 °985 18	·880 64 ·929 14 ·996 12	98 99 100
101	°121 05 °000 00	°980 26 °985 06	·859 21 ·985 06	·871 30 ·617 44	·988 75 ·993 76	376 32	101

OM

VALUES OF TEMPORARY ANNUITIES OF 1

 3^{1}_{2} per cent.

											CENT.
Dura-	10	II	12	13	14	15	16	17	18	19	Dura-
tion.	22:393	22.256	22.114	21.967	21.816	21.660	21.499	21.333	21.163	20.987	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	963	.963	.963	.963	.963	.963	'963	.963	.962	'962	1
2	1.890	1.890	1.890	1.890	1.800	1.889	1.880	1.889		1.889	2
3	2.483	2.783	2.485	2.782	2.782	2.481	2'781	2.481	2.480	2.480	3.
4	3.642	3.642	3.642	3.641	3.641	3.640				1	
		-					3.639	3.639	3.638	3.637	4
5	4.470	4.469	4.469	4.468	4'467	4.466	4.465	4.464	4.463	4.461	5
6	5.267	5.266	5.265	5°264	5.263	5.561	5°260	5.528	5.256	5°254	6
7	6.033	6.035	6.031	6.030	6.058	6.056	6.024	6.055	6.050	6.012	7
8	6.772	6.770	6.769	6.767	6.765	6.762	6.760	6.757	6.753	6.750	8
9	7.482	7.480	7.478	7.476	7.473	7.470	7.467	7.463	7.459	7'454	9
10	8.166	8.164	8.161	8.128	8.122	8.121	8.147	8.142	8.137	8.131	10
1	8.824	8.821	8.818	8.814	8.810	8.806	8.801	8.795	8.789	8.781	1
2	9'457	9.454	9.450	9°446	9'441	9.435	9.429	9.422	9'415	9.406	2
3	10,099	10.065	10.022	10.02	10.047	10.040	10'033	10.022	10,019	10.000	3
4	10.652	10.647	10.642	10:636	10.629	10.621	10.613	10.603			
				1				10 003	10.293	10.285	4
15	11.512	11,510	11,503	11,139	11,188	11,180	11.140	11.120	11'147	11'134	15
6	11.757	11.751	11.743	11.735	11.426	11.419	11.402	11,995	11.679	11.664	6
7	12'278	12.540	12,595	12'253	12'242	12'231	12.518	12.304	12,180	12'172	7
8	12.778	12.440	12.760	12.750	12.738	12'725	12.411	12.695	12.678	12.660	8
9	13.259	13.250	13.539	13.227	13'214	13'199	13.183	13.166	13'147	13'127	9
20	13'721	13.711	13.699	13.685	13.671	13.654	13.637	13.618	13.597	13'574	20
1	14.162	14.123	14.140	14.15	14,100	14'091	14.071	14.020	14'028		1
2	14'591	14.248	14.263				14.488			14.003	2
3				14.247	14.529	14.209		14.465	14.440	14.413	
4	15.000	14.986	14.969	14.951	14.932	14'910	14'887	14.862	14.835	14.806	3
	15.393	15.377	15.359	12,339	15.318	15.595	15°269	15.545	15,513	12.181	4
25	15.769	15.752	15.732	15.411	15.688	15.663	15.635	15.606	15.574	15.240	25
6	16.130	16,111	16.000	16.067	16.042	16.012	15'985	15.954	15.920	15.884	6
7	16.477	16.456	16.433	16.408	16.381	16.352	16'320	16.586	16.220	16.511	7
8	16.800	16.786	16.761	16.735	16.406	16.674	16.641	16.604	16.266	16.524	8
9	17'127	17'102	17.076	17.047	17.016	16.983	16.947	16.908	16.867	16.822	9
30	17.431	17.405		17.346				17.198	17.154	17'107	20
1		17.695	17:377		17.313	17.277	17.239				30
2	17.723		17.665	17.632	17.597	17.559	17.218	17.474	17.428	17:378	1
3	18.003	17.972	17.940	17.905	17.867	17.827	17.784	17.737	17.688	17.635	2
4	18.268	18.237	18.203	18.166	18'126	18.083	18.037	17.988	17.936	17.880	3
	18.23	18.490	18.454	18.412	18.373	18.327	18.279	18.227	18.175	18.113	4
35	18.767	18.732	18.693	18.62	18.608	18.260	18.209	18.454	18.396	18.334	35
6	19,000	18.963	18.922	18.848	18.831	18.781	18.727	18.670	18.609	18.243	6
7	19.222	19.183	19'140	19'094	19.045	18.992	18.935	18.874	18.810	18.741	7
8	19'434	19'392	19'347	19.299	19.247	19.191	19.135	19.068	10,001	18.058	8
9	19.636	19.592	19.245	19'494		19.381	19'318	19.252	19.181	19'105	9
40	19.829	19.782	19.733	19.679	19.622	19.261	19.495	19'425	19.351	19.271	40
1	20,015	19,963	19,011				19 495	19.589		19'428	1
2	20,189	20,132	20.080	19.855	19.795	19.891			19.211		
3	20,321			20'022	19,959		19.820	19'743	19.662	19.275	2
4		20.728	20'241	20.179	20,113	20'043	19'968	19.888	19.803	19'712	3
	20.208	20.452	20.392	20.358	20.529	50,180	20.104	20.054	19.935	19.840	4
45	20.657	20.299	20.236	20.469	20.397	20.350	20'238	20,121	20.020	19,960	45
в	20.798	20'737	20.671	20.001	20.256	20.446	20,361	20.240	20'174	20'071	6
7	20.031	20.864	20'799	20.726	20.648	20.264	20.475	20'381	20.581	20'174	7
8	21.029	20'990	20.018	20.842	20.761	20.674	20.282	20.484	20.379	20.598	8
9	21'174	21'105	21.031	20'952	20.867	20'777	20.681	20.579	20'471	20.352	9
					-						
	10	II	12	13	14	15	16	17	18	19	
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VALUES OF TEMPORARY ANNUITIES OF 1

 $3^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

Dura-	20	21	22	23	24	25	26	27	28	29	Dura-
tion.	20.808	20.623	20.434	20.241	20.044	19.842	19.635	19.425	19.211	18.992	tion.
0	.000	.000	*000	.000	.000	000	.000	.000	.000	.000	0
1	.962	.962	.965	'962	*962	'962	.961	.061	.961	.061	1
2	1.888	1.888	1.884	1.887	1.886	1.886	1.882	1.882	1.884	1.883	2
3	2.779	2.778	2.777	2.776	2.775	2.774	2.773	2.772	3.622	2.469 3.620	$\begin{bmatrix} 3 \\ 4 \end{bmatrix}$
4	3.636	3.634	3.633	3.631	3.630	3.628	3.020	3.624			
5	4.460	4.458	4.456	4.453	4.451	4°448 5°236	4°445 5°232	4.442	4°439 5°223	5,510	5 6
6	5°252	5°249	5.246	5.243	5'240	5'992	5.987	5.982	5.976	5.970	7
8	6.745	6.741	6.736	6.430	6.725	6.718	6.712	6.705	6.697	6.690	8
9	7.449	7.443	7.437	7.430	7.423	7.415	7.407	7.398	7.389	7:380	9
10	8.125	8.112	8.110	8.103	8.093	8.083	8.074	8.063	8.052	8.041	10
1	8.774	8.765	8.756	8.746	8.736	8.724	8.713	8.700	8.687	8.674	1
2	9.397	9.387	9.376	9.364	9.352	9.339	9.325	9.311	9.296	9.580	2
3	9.995	9.983	9.971	9.957	9'943	9.928	9.913	9.895	9.878	9.860	3
4	10.269	10.229	10.241	10.259	10.210	10.492	10.474	10.452	10°435	10,412	4
15	11.150	11,104	11.088	11.011	11.025	11.033	11.013	10.001	10.068	10.945	15
6	11.648	11.631	11.913	11.293	11.245	11,220	11.228	11.203	11.478	11'452	6
7	12'154	12.135	12'115	12.093	12.070	12.045	12.050	11'993	11.965	11.936	7
8	12.640	12.018	12.296	12.22	12.246	12.219	12,491	12'461	12.430	12.839	8 9
9	13,102	13.081	13.026	13.030	13.001	12.972	12'941	12.908			
20	13.220	13.24	13.497		13.437	13,402	13.371	13.335	13.508	13.259	20
1	13'976	13.948	13.918	13.887	13.853	13.818	13.781	13'742	13.4.086	13.659	$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$
3	14.384	14.354	14.321	14.669	14.630	14.212	14.545	14'130	14.452	14,401	3
4	15.148	12,115	15.074	15.034	14.992	14'947	14.900	14.851	14'799	14.745	4
25	15.204	15.466	15.425	15.385	15.336	15'289	15.238	15.182	15.130	15'071	25
6	15.845	15.803	15.700	15'714	15.665	15.614	12.200	12,203	15.443	12.381	6
7	16.140	16.152	16.079	16.030	15.978		15.865	15.804	15.740	15.673	7
8	16.480	16.432	16.383	16.330	16.275	16.516	16.122	16.000	16.051	15.950	8
9	16.775	16.725	16.672	16.616	16.557	16°495	16.429	16.360	16.584	16.511	9
30	17.056	17.003	16.947	16.888	16.825	16.759	16.689	16.615	16.238	16.456	30
1	17.324	17.268	17.209	17'145	17'079	17.008	16.935	16.826	16.774	16.687	1
2	17.279	17.219	17.456	17.389	17.319	17.244	17.166	17.083	16.996	16.904	
3	17.821	17.758	17.691	17.620	17.546	17.467	17.384	17'297	17.204	17.107	3
4	18.020	17.984	17.914	17.839	17.760	17.677	17.590	17.497	17.400	17'297	4
35	18.568	18.197	18.124	18.045	17.962	17.874	17.782	17.684	17.582	17.473	35
6 7	18.473	18.400	18.325	18.739	18.330	18.023	17.962	17.859	17.751	17.637	6 7
8	18.852		18.684	18.593	18.496	18.394	18.287	18.174	18.022	17,029	
9	19'024		18.849	18.753	18.652	18.242	18.433	18.314	18.180	18.028	
40	19.187		19,003	18.903	18.797			18.443	18.313	18.175	40
1	19'339		19.147	19.042	18.931	18.812	18.692	18.262	18.426	18.583	1
2	19.485			19.175	19.026		18.806				
3	19.616		19°406	19.291	19.171	19.044	18.911	18.770	18.622	18:467	3
4	19.740	19.633	19.21	19°402	19.277	19.144	19.006	18.890	18.400	18.246	4
45	19.855			19.204	19.373	19.236	19.092	18.940	18.782	18.615	45
6	19.965		19.725	19.597	19.461	19.319	19.140	19.013	18.849	18.677	6
7	20'060	1 , , .		19.681	19.241	19'394	19.239	19.077	18.908	18.731	7
8 9	20,121			19.758	19.613	19'461	19.301	19.184	19.002	18.778	8 9
-	20°234	20,102	19.970	19.827	19.677	19.20	19.356	19 104		10019	
	20	21	22	23	24	25	26	27	28	29	
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VALUES OF TEMPORARY ANNUITIES OF 1

 $3^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

Dura-	30	31	32	33	34	35	36	37	38	39	Dura-
tion.	18.769	18.542	18.311	18.075	17.835	17.591	17.342	17.088	16.830	16.566	tion.
0	.000	,000	.000	.000	*000	.000	.000	.000	,000	.000	0
1	.960	.960	.960	.960	'959	959	1959	.928	'958	'958	1
2	1.883	1.885	1.881	1.880	1.879	1.879	1.878	1.877	1.876	1.875	2
3	2.768	2.766	2.762	2.763	2.762	2.760	2.758	2.756	2.754	2.752	3
4	3.617	3.612	3.615	3.910	3.607	3.604	3.601	3.298	3.595	3,201	4
5	4'432	4.429	4°425	4.421	4.417	4.413	4.408	4.404	4'399	4°394	5
6	5'214	5.500	5°204	2,138	2,133	5.184	2.181	5'174	5.164	2,160	6
7	5.963	5.957	5.950	5'943	5.632	5.928	5,050	2,011	5,005	5.892	7
8	6.682	6.673	6.664	6.655	6'646	6.636	6.626	6.612	6'604	6.291	8
8	7.370	7.360	7.348	7.337	7.326	7.314	7.301	7.287	7'273	7.258	9
10	8.029	8.019	8.003	7.990	7.976	7.961	7°945	7.929	7.912	7.893	10
1	8.660	8.645	8.629	8.613	8.597	8.579	8.261	8.241	8.251	8.499	1
2	9.263	9.246	9.558	9,500	9,190	9,169	9.148	9,152	0,100	9°074	2
3	9.841	9.821	9.800	9.778	9.756	9'732	9.707	9.680	9.652	9.622	3
4	10.393	10.340	10.346	10.325	10.296	10.560	10.240	10,500	10.174	10'142	4
15	10.030	10.892	10.868	10.840	10811	10.480	10.747	10.415	10.672	10.639	15
6	11.424	11,399	11.362	11.334	11,301	11,599	11'229	11,100	11,148	11,103	6
7	11,002	11.873	11.839	11.804	11.767	11.728	11.684	11.643	11,299	11,246	7
8	12.364	12,358	12,531	12.52	12,511	12'167	12'121	12'072	12.050	11.964	8
9	15.801	12.762	12,451	12.677	12.632	12.284	12.233	12.479	12,421	15,320	9
20	13.514	13.172	13.150	13.085	13.035	12.979	12.923	12.863	12.799	12.731	20
1	13.614	13.267	13.217	13'465	13.411	13,323	13.501	13.525	13'155	13.080	1
2	13,001	13'940	13'885	13.859	13.769	13.406	13.638	13.266	13'490	13.408	2
3	14'348	14'293	14.234	14.143	14'108	14.039	13.966	13.884	13.804	13.412	3
4	14.688	14.628	14.262	14'498	14.428	14.323	14.523	14.189	14.099	14.005	4
25	15.010	14'945	14.877	14.802	14.729	14.648	14°562	14'471	14.373	14.269	25
6	15.314	15.245	15.171	15.094	15'012	14.925	14.832	14.734	14.629	14.214	6
7	15.605	15.28	1.5.449	15°365	15.548	15.184	15.082	14.979	14.867	14.747	7
8	15.874	15.794	15.400	15.620	15.25	15.426	15.350	15.502	15.084	14.959	8
9	16.130	16.044	15.954	15.859	15.759	15.622	15.238	15'418	15.500	15.123	9
30	16.370	16.279	16.183	16.085	15'975	15.861	15'741	15.612	15.476	15.331	30
1	16.296	16.499	16.392	16.530	16.146	16.022	15.927	15.491	15.647	15°493	1
2	16.807	16.702	16.296	16°482	16.365	16.534	16,008	15.954	15.803	15.640	2
3	17.004	16.896	16.485	19,991	16.233	16.398	16.222	16.103	15.943	15.773	3
4	17.188	17.074	16.923	16.822	16,691	16.249	16.398	16.538	16.040	12.891	4
35	17.359	17.238	17'111	16.977	16.832	16.682	16.227	16.360	16.183	15'997	35
6	17.217	17.390	17.256	17.112	16.967	16.809	16.644	16'469	16.584	16.000	6
7	17.663	17.230	17.389	17'241	17.086	16,051	16.748	16,266	16.374	16.145	7
8	17.796	17.657	17.210	17.355	17.193	17.021	16.841	16.621	16.452	16.243	8
8	17.919	17.773	17.619	17.458	17.589	17.111	16.923	16.726	16.250	16.304	9
40	18.030	17.879	17.718	17.220	17'375	17.189	16.992	16'792	16.579	16.326	40
1	18.135	17.973	17.807	17.632	17.450		17.028	16.848	16.629	16.400	1
2	18.223	18.028	17.886	17.705		17.318	17.115	16.896	16.671	16.437	2
3	18°304	18.134	17'955	17.769	17.574		17.128	16.936	16.706	16.467	3
4	18.377	18.301	18.019	17.824	17'623	17.414	17.196	16.970	16.735	16.491	4
45	18.441	18.259	18.069	17.871	17.666	17.451	17.228	16.997	16.758	16.211	45
6	18.497	18.310	18:115	17.912	17.701		17.255	17.020	16.777	16.526	6
7	18.246	18.354	18.124	17.946	17.731	17.208	17.276	17.037	16.491	16.537	7
8	18.588	18.392	18.187	17.975	17.755	17°528	17.293	17.051	16.802	16.246	8
8	18.624	18.423	18'214	1,4,998	17.775	17.244	17:307	17.062	16.811	16.223	9
	30	31	32	33	34	35	36	37	38	39	
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VALUES OF TEMPORARY ANNUITIES OF 1

 $3^{1}_{\bar{2}}$ PER CENT.

	40	41	42	43	44	45	46	47	48	49	1
Dura- tion.	16:298	16.024	15.745	15.461	15:172	14.877	14:577	14:272	13.963	13.649	Dura-
0	.000	,000	,000	0000	0000	,000	.000	,000	,000	,000	0
1 2	957	957	°957	956	1.868	.955	954	1.863	953	952	1
3	1.873	1.872	2.745	2.742		1.867 2.736	1.865		1,861	1.859	2
4	2.750	2'747			2.739	3.262	2.433	2.729	2.725	2'721	3
	3.587	3.284	3.579	3.575	3.570		3.259	3.223	3.246	3.239	4
5	4.388	4.385	4.376	4.369	4'362	4.354	4.346	4.337	4'327	4.316	5
6	5,123	5'144	5.136	5.126	5,119	5.102	5.094	5.081	5.067	5.02	6
7	5.882	5.872	5.860	5.848	5.834	5.820	5.804	5.787	5.768	5.748	7
8 9	6.578	6.262	6.220	6.534	6.214	6.498	6.478	6.456	6'432	6.407	8
	7.242	7.225	7.206	7.186	7.162	1	7.112	7.089	7.060	7.028	9
10	7.874	7.853	7.830	7.806	7.780		7.721	7.688	7.652	7.613	10
1	8.475	8.450	8.423	8.394	8.363	8:329	8.292	8.523	8,510	8.163	1
2	9.047	9.017	8.986	8.921	8.914	8.875	8.831	8.784	8.734	8.679	2
3	9.290	9.226	9.219	9'479	9.436		9,339	9.285	9.556	9,163	3
4	10,102	10,066	10.023	9'977	9.928	9.874	9.817	9.754	9.686	9.614	4
15	10.294	10.248	10,200	10°447	10,391	10,330	10.562	10,103	10'117	10'034	15
6	11.026	11,002	10,020	10,891	10.827	10.728	10.684	10.604	10.212	10'425	6
7	11'492	11.435	11.373	11.304	11,532	11,120	11.026	10,086	10.889	10.786	7
8	11.002	11.841	11.772	11.698	11.918	11.233	11.440	11.341	11.534	11,110	8
9	12.533	12,555	12°146	12.064	11.975	11.881	11.779	11.999	11.221	11.422	9
20	12.658	12.280	12.496	12.405	12.308	12.204	12'093	11'972	11.843	11.406	20
1	13.000	12'914	12.822	12'724	12.617	12.204	12'382	12.221	12,110	11.961	1
2	13'321	13°227	13'127	13.010	12'904	12'780	12.648	12.202	12.354	12'192	2
3	13.620	13.219	13.410	13.293	13.168	13'034	12.891	12'737	12.574	12,400	3
4	13.899	13.789	13.671	13.245	13.410	13°266	13,115	12.948	12'773	12.287	4
25	14.158	14.039	13.013	13.777	13'632	13.478	13.313	13.137	12'951	12.753	25
6	14.398	14'270	14'134	13.989	13.834	13.669	13.494	13.307	13,100	12'900	8
7	14.619	14.483	14.337	14.182	14'017	13.842	13.656	13.458	13.549	13.029	7
8	14.822	14.677	14.22	14.357	14.182	13'997	13.800	13'591	13'372	13'141	8
9	15.008	14.854	14.690	14.212	14'330	14'134	13'927	13.408	13.478	13'237	9
30	15'177	15'014	14.840	14.657	14.462	14.256	14.039	13.810	13.240	13,319	30
1	12.331	15.128	14.976	14.782	14.578	14.363	14.136	13.898	13.648	13.388	1
2	15.469	15.588	15.096	14.894	14.680	14.456	14°220	13.972	13'714	13'446	2
3	15.203	15'403	15.505	14.991	14.768	14.535	14'291	14.035	13.769	13.493	3
4	15'703	15.202	15.596	15.076	14.845	14.603	14.351	14.087	13.814	13.231	4
35	15.800	15.294	15'377	15°149	14'910	14.661	14.401	14.130	13.851	13.265	35
6	15.886	15'671	15.446	15'211	14'964	14°708	14'442	14.162	13.880	13.286	6
7	12,000	15.438	15.206	15.563	15.010	14.748	14°475	14.103	13'902	13.604	7
8	16.054	15.795	15.226	15'307	15.048	14.779	14.202	14'215	13,050	13.618	8
9	16.078	15.843	15.298	15'343	15.078		14.22	14.531	13.933	13.628	9
40	16.154	15.883	15.632	15.372		14.824	14.538	14'244	13'943	13.635	40
1	16.163	12,019	12.660	15.395	12,151		14.550	14 244	13 943	13.640	1
2	16,104	15'942	15.682	15'413	15,132	14.851	14.559	14.260	13'954	13.644	2
3	16.519	15.963	15.699	15.427	15'146		14.262	14.264	13.957	13.646	.3
4	16.540	15.080	15'712	15'437	15.124		14.269	14'267	13.960	13.647	4
45	16.252	15'992	15.722	15'445	12,160					13.648	45
6	16.522	16.002	15 722	15°450	15.164	14.872	14.572	14'269	13,961	13.649	6
7	16.577	16,000	15.735	15'454	15'167	14.874	14 5 7 4	14 271		13.649	7
8	16.583	16.014	15'738	15.456	12,168	14.875	14.576	14.272	13.962	13.649	8
9	16.588	16.018	15.741	15.458	15.140	14.876	14.577	14.272	13.963	13.649	9
			3 / 4-		3 1/3	7 7 7 3		7 7 7 5		3.545	
	40	41	42	43	44	45	46	47	48	49	
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VALUES OF TEMPORARY ANNUITIES OF 1

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Dura-	50	51	52	53	54	55	56	57	58	59	Dura-
tion-	13.330	13.008	12.681	12:351	12.017	11.681	11.343	11.001	10.659	10.316	tion.
0	.000	'000	.000	'000	*000	.000	.000	.000	.000	.000	0
1	952	.921	.950	'949	' 948	.946	*945	'944	'942	.940	1
2	1.857	1.854	1,821	1.848	1.842	1.841	1.837	1,835	1'828	1.822	2
3	2.410	2'711	2.702	2.699	2.692	2.685	2.677	2.668	2.659	2.648	3
4	3.231	3°523	3.213	3.203	3'492	3.480	3.467	3.452	3.437	3.420	4
5	4.304	4.591	4'277	4.565	4'245	4.227	4.208	4.186	4'163	4.138	5
6	5.035	5.017	4.998	4.977	4°954 5'618	4'929	4.902	4.872	4.840	4.805	6 7
7 8	5.727	5°7°3 6°348	5.677	5.649	6.241	5.285 6.198	5°549	6.103	5.468	5.422	8
9	6.379	6.955	6.312	6.870	6.822	6.770	6.413	6.652	6.286	6.212	9
10	7.571		7.475	7.421	7.363	7.300	7.232	7.128	7.079	6.994	10
1	8.113	7°524 8°058	7.998	7'935	7.866	7.791	7.710	7.624	7.230	7.430	1
2	8.620	8.555	8.486	8.412	8.331	8.244	8.120	8.049	7'941	7.825	2
3	9.094	9,019	8.939	8.853	8.760	8.660	8.22	8.437	8.314	8.182	3
4	9.535	9.450	9.358	9°260	9.124	9.040	8.919	8.788	8.649	8.201	4
15	9.945	9.848	9.745	9.634	9.212	9.387	9.251	9.102	8.950	8.785	15
6	10.324	10,516	10,100	9.977	9.844	9.701	9.220	9.388	9.217	9.036	6
7	10.674	10.224	10.425	10.589	10.141	9'984	9.818	9'641	9'453	9.256	7
8	10.996	10.863	10.722	10.211	10,410		10.026	9.864	9.661	9.447	8
9	11,500	11.142	10,000	10.859	10.620	10'464	10.564	10,020	9.841	9.911	9
20	11.228	11°400	11'232	11.024	10.864	10.663	10,42	10,550	9.996	9.752	20
1	11.801	11.630	11.448	11.527	11.023	10.838	10.013	10.376	10,158	9.870	1
2	12.050	11.836	11.641	11.436	11,510	10,000	10.421	10,200	10,530	9.968	2
3	12.519	12.019	11.811	11.293	11,363	11,151	10,869	10.602	10'332	10.049	3 4
4	12.390	15.181	11.061	11.730	11.487	11,535	10,088	10.693	10.408	10'115	
25	12.244	12.323	12,001	11.848	11.293	11'327	11,021	10.765	10.470	10.162	25 6
6 7	12.679	12.446	12.202	11.948	11.082	11,402	11'119	10.869	10.224	10.504	7
8	12.298	12.23	12.378	12,033	11.817	11.21	11'217	10,002	10.224	10,565	8
9	12.084	12'719	12'445	15,191	11.866	11.263	11.52	10.933	10.609	10.279	9
30	13.057	12.483	12.200	12.207	11.905	11.292	11.548	10'954	10.625	10'292	30
1	13.114	12.835	12.244	12'245	11.936	11.620	11.298	10.969	10.637	10.300	1
2	13.167	12.877	12.579	12.274	11.959	11.638	11'312	10.080	10.645	10.306	2
3	13'207	12.011	12.607	12'296	11.977	11.625	11.322	10.088	10.620	10,310	3
4	13'239	12'937	12.628	12,313	11.000	11.665	11,330	10'993	10.624	10,315	4
35	13.564	12.957	12.644	12.322	11,000	11.669	11,332	10'997	10.626	10.314	35
в	13.583	12.973	12.656	12.334	12,000	11.643	11.338	10,000	10.628	10.312	6
7	13.508	12.984	12.664	12.340	12'010	11.677	11,340	11,000	10.658	10.312	8
8	13.308	12'992	12.670	12.344	12,013	11.678	11.341	11,001	10.659	10.312	9
9	13,310	12.997	12.674	12,347	12.012	11.680	11'342	11,001	10.659	10,319	40
40	13.321	13.001	12.677	12'349	12.019	11.680	11.342	11,001	10.659	10,319	1
1 2	13.325	13.004	12.678	12,320	12'017	11.681	11,345	11,001	10.029	10,316	2
3	13.328	13.002	15.680		12.017		11'342		10.659	10,319	3
4	13,350	13.002	13.680	12,321		11.681	11'342	1	10.629	59	
45	13.330		12.680		12'017	1	11'342	11,001	58		
8	13,330	13.007	12.680		12'017		11.343	57		50	
7	13.330	13.007	12.681	12.321	12.017	11.681	0.0		51	13.330	
8	13.330	13.002	13.981	12.351	12.014			52	13.008	13.330	52
9	13.330	13.002	13.081	15,321				12.681	13.008	13,330	1
								12.681	13.002	13,330	50
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	50	51	52	53	54	55	56	52	51	50	
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VALUES OF TEMPORARY ANNUITIES OF 1

31 PER 2 CENT.

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Dura-	60	61	62	63	64	65	66	67	68	69	Dura-
tion.	9.972	9.627	9.284	8.941	8.600	8.261	7.925	7.591	7.262	6.937	tion.
0	.000	,000	.000	.000	.000	.000	.000	,000	.000	.000	0
1	.938	.936	'934	.031	'929	926	922	.919	915	.911	1
2	1.817	1.810	1.804	1.796	1.488	1'779	1.770	1.760	1.748	1.436	2
3	2.637	2.625	2.611	2.297	2.281	2.264	2.545	2.252	2.204	2°480	3
4	3.401	3,381	3.359	3'335	3,310	3.585	3,52	3.519	3.184	3,146	4
5	4'111	4.081	4.049	4.014	3.976	3.936	3.892	3.844	3.794	3.739	5
6	4.767	4.726	4.682	4.635	4.283	4.28	4.469	4.402	4.336	4.563	6
7	5'373	5.350	5.565	5.500	5°134	5.065	4.982	4.003	4.816	4.723	7
8	5.930	5.865	5.790	5.413	5.629	5.240	5.445	5'344	5.536	5.155	8
9	6.439	6.324	6.569	6.14	6.04	5.966	5.852	5.430	2.601	5.466	9
10	6.903	6.802	6.400	6.288	6°469	6.345	6.508	6.066	5.019	5.759	10
1	7.323	7.209	7.086	6.956	6.818	6.672	6.214	6.322	6.184	6.006	1
2	7'702	7.570	7.430	7.282	7'124	6.928	6.784	6.601	6.410	6.511	2
3	8.041	7.892	7.734	7.267	7.391	7.202	7.011	6.809	6.298	6.380	3
4	8.343	8.177	8.000	7.815	7.620	7.416	7.503	6.981	6.425	6.214	4
15	8.610	8.426	8.232	8.058	7.815	7.593	7.362	7.153	6.877	6.625	15
6	8.844	8.643	8.431	8.510	7.980	7.740	7'493	7.538	6.977	6.410	6
7	9.048	8.829	8.601	8.363	8.114	7.861	7.599	7.330	7.055	6.776	7
8	9.223	8.988	8.744	8.491	8.229	7.959	7.683	7.401	7.112	6.825	8
9	9'372	9,155	8.863	8.596	8.350	8.038	7.749	7.456	7.160	6.861	9
20	9'498	9°234	8.961	8.680	8.393	8.099	7.800	7.497	7.193	6.884	20
1	9.602	9.322	9°041	8.748	8.449	8'146	7.838	7.28	7.216	6.902	1
2	9.688	9.400	9.104	8.801	8.493	8.181	7.866	7.549	7.533	6.917	3
3	9.758	9.459	9.123	8.842	8.226	8.207	7.886	7.264	7.244	6.925	4
4	9.813	9.202	9,191	8.872	8.220	8.552	7.900	7.575	7.521	6.930	
25	9.857	9.240	9.519	8.894	8.264	8.538	7.909	7.281	7.256	6.933	25
6	9.890	9.267	9.240	8.010	8.579	8.247	7.916	7.286	7.258	6.935	6
7	9.912	9.286	9.252	8.922	8.284	8.523	7.919	7.288	7.260	6.936	8
8	9.933	9.600	9°266	8.929	8.292	8.256	7.922	7.590	7.261	6.036	9
9	9.946	9.610	9°273	8.934	8.596	8.228	7'923	7.290	7.261	6.936	
30	9.926	9.617	9'277	8.937	8.598	8.260	7.924	7.291	7.262	6.937	30
1	9.962	9.621	9.580	8.939	8.599	8.260	7.924	7.591	7.262	6.937	2
2	9.966	9.624	9.585	8.940	8.299	8.261	7.924	7.591	7.262	6.937	3
3	9.968	9.625	9.283	8.941	8.600	8.261	7'925	7.591	7.262	69	0
4	9.970	9.626	9'284	8.941	8.600	8.261	7.925	7.591	68		
35	9.971	9.627	9.584	8.941	8.600	8.261	7'925	7.591		40	
6 7	9'971	9.627	9.284	8.941	8.600	8.361	7'925	67	41		
8	9.972	9.627	9.284	8.941	8.600	65		42		16.298	
9	9'972	9.627	9.284	8.941	64		43	15.745	16.024	16.298	62
40		9.627		63		44			16.024	16.508	1
1	9.972	9.627	9°284 62		45		15.461	15'745	16.054	16.297	60
2	9.972	61		46		15.172	15.461	15.745	16'024	16.297	59
	60		47	1	14.877	15.175	15.461	15.745	16.054	16.297	8
		48		14.577	14.877	15.141	15.461	15.745	16.024		7
	49		14.272	14.277	14.877	15.141	15.461	15.745	16.024	16.297	6
	-	13.963	14.272	14.577	14.877	15.141	15.461	15.745	16.024	16'297	5
	13.649	13.963	14.272	14.577	14.877	15.171	15.461	15.745	16.023	16'297	54
53	13.649	13.963	14.575	14'577	14.877		15.460	15.744	16.023	16.502	3 2
2	13.649	13.963	14'272	14.22	14.877	15.171	15.460	15.744	16'022	16.304	1
1	13.649	13'963	14'272	14.577	14.877	15.141		15.743	16.050	16,591	50
50	13.649	13.963	14.525	14.277	14.876		15.459	15.742			-50
	49	48	47	46	45	44	43	42	41	40	

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VALUES OF TEMPORARY ANNUITIES OF 1

 $3\frac{1}{2}$ PER CENT.

Dura-	70	71	72	73	74	75	76	77	78	79	Dura-
tion.	6.616	6.301	5.991	5.688	5.391	5.102	4.819	4.545	4.278	4.020	tion.
0	'000	.000	000	.000	.000	.000	.000	.000	.000	.000	0
1	.906	.001	.896	.890	.884	.877	.869	.861	.852	.843	1
2	1.453	1.400	1.693	1.676	1.658	1'639	1.617	1.292	1.240	1.244	2 3
3	2.455	2'427	2.398	2.366	5,331	2.854	2.255	2.213	2.659 2.659	2°586	4
4	3.100	3.002	3.012	2.965 3.481	2°911	3.322	3.540	3.121	3.024	2.958	5
5 6	3.681	3.619	3.22	3.920	3.822	3.717	3.607	3,493	3'373	3.548	6
7	4.624	4.219	4.408	4'291	4.168	4.039	3.905	3.765	3.621	3.471	7
8	5.001	4.874	4.740	4.599	4°453	4.300	4°142	3'979	3.811	3.639	8
9	5.323	5°173	2,019	4.853	4.683	4.208	4.327	4.145	3.953	3.762	9
10	5.294	5.422	5°243	5.028	4.866	4.670	4.469	4.265	4.028	3.820	10
1	5.820	5.626	5.427	5.551	5.010	4.795 4.888	4.654	4.355	4°133 4°186	3.911	2
3	6.002	5.792	5.573 5.687	5'349	5.120	4.957	4.4.11	4.462	4.551	3,980	3
4	6.274	5'924	5.775	5.20	5.564	5.006	4.750	4.496	4.244	3.997	4
15	6.368	6.106	5.841	5.574	5.302	5.041	4.776	4.216	4°259	4.007	15
6	6.439	6.162	5.890	5.613	5.338	5.064	4.794	4.28	4.268	4.013	6
7	6.493	6.500	5.924	5.640	5.328	5.079	4.802	4°536	4.573	4'017	7
8	6.233	6.540	5.948	5.658	5'372	5.089	4.811	4.240	4.276	4.018	8
9	6.261	6.565	5.962	5.670	5,380	5'094	4.812	4°543	4°277 4°278	4.010	20
20	6.281	6.277	5'975 5'982	5.678 5.682	5°385 5°388	5.100 2.008	4.817 4.818	4°544 4°544	4.278	4.020	1
$\frac{1}{2}$	6.603	6.287 6.293	5.986	5.682	2,390	2,101	4.819	4.545	4.548	4'020	2
3	6.600	6.599	2.989	5.686	2,391	2,101	4.819	4.545	4.278	4.020	3
4	6.612	6.298	5.990	5.687	2,391	2,101	4.819	4.545	4.548	79	
25	6.614	6.300	5,991	5.688	5.391	2,101	4.819	4.545	78	30	
6	6.615	6.300	2,991	5.688	2,331	5'102	4'819	77		30	
7	6.616							-	71		
0	100-0	6.301	2,001	5.688	5.391	5,103	76	32	31	18.769	
8	6.616	6.301	2,991	5.688	5,391	5°102 75		32	18.542	18.769	72
9	6.616	6.301	2,881	5.688 5.688		75	33	18:311	18.542	18.769	1
9 30	9.919	6,301 6,301 9,301	2.001 2.001 2.001	5.688 5.688	5,391	34	33 18·075	18.311	18·542 18·542 18·542	18·769 18·769	1 70
9	6.616	6.301	5'991 5'991 5'991 72	5.688 5.688	5'391 74 35	75 34 17·835	33 18.075 18.075	18.311	18·542 18·542 18·542 18·542	18.769 18.769 18.769	1 70 69
9 30 1	0.019 0.010 0.010	6.301 6.301 6.301	2.001 2.001 2.001	5.688 5.688 73 36	5°391 74 35 17°591	75 34 17.835 17.835	33 18.075 18.075 18.075	18.311 18.311 18.311	18·542 18·542 18·542 18·542 18·542	18.769 18.769 18.769 18.769	1 70 69 8
9 30 1	6.616 6.616 6.616 70	6.301 6.301 6.301	5'991 5'991 5'991 72	5.688 5.688 73 36 17.342	5'391 74 35 17'591	75 34 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075	18.311 18.311 18.311 18.311	18.542 18.542 18.542 18.542 18.542 18.542	18.769 18.769 18.769 18.769 18.769	1 70 69 8 7
9 30 1	6.616 6.616 6.616 70	6.301 6.301 6.301	5.991 5.991 72 37	5.688 5.688 73 36 17.342 17.342	5'391 74 35 17'591 17'591	75 34 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075	18.311 18.311 18.311 18.311	18·542 18·542 18·542 18·542 18·542	18.769 18.769 18.769 18.769	1 70 69 8 7 6
9 30 1	6.616 6.616 6.616 70	6.301 6.301 6.301 71	5'991 5'991 72 37 17'088	5.688 5.688 78 36 17.342 17.342 17.342	5'391 74 35 17'591 17'591 17'591	75 34 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075	18:311 18:311 18:311 18:311 18:311	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542	18.769 18.769 18.769 18.769 18.769 18.769 18.768 18.768	1 70 69 8 7 6
9 30 1	6.616 6.616 6.616 6.616 70 39 16.566 16.566	6'301 6'301 6'301 71 38 16'830 16'830	5'991 5'991 5'991 72 37 17'088 17'088 17'088	5.688 5.688 73 36 17.342 17.342	5'391 74 35 17'591 17'591	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075	18:310 18:311 18:311 18:311 18:311	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544	18.769 18.769 18.769 18.769 18.769 18.769 18.768 18.768 18.768	1 70 69 8 7 6 5 64 3
9 30 1 2 63 2	6.616 6.616 6.616 6.616 70 39 16.566 16.566	6'301 6'301 6'301 71 38 16'830 16'830 16'830	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342	5'391 74 35 17'591 17'591 17'591 17'591 17'591 17'591	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18·075 18·075 18·075 18·075 18·075 18·075 18·075 18·075	18.310 18.311 18.311 18.311 18.311 18.311 18.311	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541	18·769 18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768	1 70 69 8 7 6 5 64 3 2
9 30 1 2 63 2 1	6.616 6.616 6.616 6.616 70 39 16.566 16.566 16.566	6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342	5'391 74 35 17'591 17'591 17'591 17'591 17'591 17'591 17'591	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075	18.311 18.311 18.311 18.311 18.311 18.311 18.311 18.311 18.311	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541 18·544	18.769 18.769 18.769 18.769 18.769 18.769 18.769 18.768 18.768 18.768 18.768	1 70 69 8 7 6 5 64 3 2
9 30 1 2 63 2 1 60	6.616 6.616 6.616 70 39 16.566 16.566 16.566	6.301 6.301 6.301 71 38 16.830 16.830 16.830 16.830 16.830	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342	35 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074	18.311 18.311 18.311 18.311 18.311 18.311 18.311 18.310 18.310 18.310 18.310	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541 18·540 18·539	18·769 18·769 18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·768 18·766 18·765	1 70 69 8 7 6 5 64 3 2 1 60
9 30 1 2 63 2 1 60 59	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566	6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342	5'391 74 35 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'591	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074	18·311 18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·310 18·310 18·309 18·309 18·309	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·544 18·544 18·549 18·539 18·538	18·769 18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·768 18·765 18·765	1 70 69 8 7 6 5 64 3 2 1 60 59
63 2 1 60 59 8	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566 16.566	6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830 16'830	5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342	5'391 74 35 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'591	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074	18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·310 18·309 18·309 18·309 18·308 18·308	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541 18·540 18·539	18·769 18·769 18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·768 18·766 18·765	1 70 69 8 7 6 5 64 3 2 1 60 59 8
9 30 1 2 63 2 1 60 59	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566	6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342	5'391 74 35 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'591	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074 18.074 18.074 18.071 18.068	18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·300 18·300 18·300 18·300 18·300 18·300 18·300 18·300	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541 18·540 18·539 18·538 18·535 18·535 18·532 18·528	18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·768 18·765 18·765 18·765 18·765	1 70 69 8 7 6 5 64 3 2 1 60 59 8 7 6
9 30 1 2 63 2 1 60 59 8 7	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566 16.566 16.566 16.566	6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342	35 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·598 17·588 17·588	75 34 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074	18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·300 18·300 18·300 18·300 18·300 18·300 18·300	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541 18·540 18·539 18·538 18·535 18·535 18·532 18·528	18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·768 18·765 18·765 18·765 18·765 18·769 18·741	1 70 69 8 7 6 5 64 3 2 1 60 59 8 7 6 5
9 30 1 2 63 2 1 60 59 8 7 6 5 5	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.565	6'301 6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'829 16'829	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'086 17'086	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.343 17.343 17.340 17.349 17.349 17.339 17.337	5'391 74 35 17:591 17:591 17:591 17:591 17:591 17:591 17:591 17:591 17:591 17:586 17:586 17:584	75 34 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.075	18·311 18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·300 18·300 18·300 18·300 18·300 18·300 18·300 18·300	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·541 18·541 18·540 18·539 18·538 18·535 18·532 18·532 18·521 18·513	18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·768 18·765 18·765 18·765 18·769 18·741	1 70 69 8 7 6 5 64 3 2 1 60 59 8 7 6 5
9 30 1 2 63 2 1 60 59 8 7 6 5 5 5 4 3	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.565 16.565	6'301 6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'829 16'829	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'086 17'085 17'085	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.343 17.343 17.340 17.339 17.337 17.334	35 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·596 17·586 17·586 17·584 17·580	75 34 17.835	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.074 18.075 18.075 18.075	18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·310 18·300 18·309 18·309 18·309 18·309 18·309 18·309 18·309 18·309 18·309 18·309 18·309 18·309	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541 18·540 18·539 18·538 18·535 18·532 18·521 18·513 18·502	18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·766 18·765 18·765 18·765 18·741 18·741 18·731 18·717	1 70 69 8 7 6 5 64 3 2 1 60 59 8 7 6 5 5
9 30 1 2 63 2 1 60 59 8 7 6 5 5 4 3 2	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.566	6'301 6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'829 16'829 16'828 16'826	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'086 17'085 17'085 17'080	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.343 17.341 17.340 17.339 17.337 17.334 17.339	35 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·596 17·586 17·586 17·586 17·586 17·586 17·586	75 34 17.835 17.836	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074 18.071 18.068 18.064 18.059 18.053 18.044	18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·310 18·300 18·300 18·300 18·300 18·300 18·300 18·300 18·300 18·300	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·541 18·540 18·539 18·538 18·538 18·535 18·532 18·521 18·513 18·520 18·488	18·769 18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·765 18·765 18·765 18·765 18·741 18·741 18·741 18·741	1 70 69 8 7 6 5 64 3 2 1 60 59 8 7 6 5 5
9 30 1 2 63 2 1 60 59 8 7 6 5 5 4 3 2 1	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.565 16.565 16.565 16.565	6'301 6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'829 16'829 16'828 16'824 16'821	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'086 17'086 17'085 17'080 17'076	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.343 17.341 17.340 17.339 17.337 17.334 17.336 17.336	5'391 74 35 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'591 17'58 17'586 17'586 17'586 17'586 17'584 17'586	75 34 17.835 17.836 17.831 17.828 17.828 17.828	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074 18.073 18.071 18.068 18.064 18.059 18.053 18.044 18.032	18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·310 18·300 18·300 18·300 18·300 18·300 18·300 18·205 18·280 18·280 18·280	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·540 18·539 18·538 18·535 18·532 18·521 18·513 18·522 18·513 18·524	18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·768 18·766 18·765 18·765 18·765 18·741 18·741 18·731 18·717	1 70 69 8 7 6 5 64 3 2 1 60 59 8 7 6 5 5 5
9 30 1 2 63 2 1 60 59 8 7 6 5 5 4 3 2	6.616 6.616 6.616 70 39 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.566 16.566	6'301 6'301 6'301 6'301 71 38 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'830 16'829 16'829 16'828 16'826	5'991 5'991 5'991 72 37 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'088 17'086 17'085 17'085 17'080	5.688 5.688 78 36 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.342 17.343 17.341 17.340 17.339 17.337 17.334 17.339	35 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·591 17·596 17·586 17·586 17·586 17·586 17·586 17·586	75 34 17.835 17.836	33 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.075 18.074 18.074 18.071 18.068 18.064 18.059 18.053 18.044	18·311 18·311 18·311 18·311 18·311 18·310 18·310 18·310 18·300 18·300 18·300 18·300 18·300 18·300 18·300 18·300 18·300	18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·542 18·544 18·540 18·539 18·538 18·535 18·532 18·521 18·513 18·522 18·513 18·524	18·769 18·769 18·769 18·769 18·769 18·769 18·768 18·768 18·765 18·765 18·765 18·765 18·741 18·741 18·741 18·741 18·741 18·741	1 70 69 8 7 6 5 64 3 2 1 60 59 8 7 6 5 5 5

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VALUES OF TEMPORARY ANNUITIES OF 1

 $3^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

Dura-	80	81	82	83	84	85	86	87	88	89	Dura-
tion.	3.771	3.230	3.298	3.075	2.861	2.657	2.462	2.276	2.100	1.932	tion.
0	.000	.000	.000	.000	000	.000	.000	.000	.000	.000	0
1	.832	.821	.809	.796	.783	.767	752	734	'716	.697	1
2	1.216	1.486	1'454	1.420	1.383	1.344	1.303	1.500	1'215	1,168	2
3	2.059	2.012	1,028	1,898	1.834	1.768	1.699	1.626	1.22	1.476	3
4	- 1			2.52	2,166	2'071	1'974	1.874	1.773	1.670	4
	2.210	2,429	2,342				-				
5	2.852	2.747	2.636	2,251	2,403	2.583	2,190	2'036	1.012	1'788	5
6	3,110	2.986	2.820	2.410	2.269	2.422	2,585	2,138	1,990	1.856	6
7	3.318	3,165	3.003	2.842	2.680	2.219	2.328	2,500	2.042	1.894	7
8	3.464	3.287	3,100	2.031	2,753	2.248	2.402	2:236	2'072	1'914	8
9	3.269	3.375	3,181	2.989	2.799	2.613	2°432	2'256	2.087	1'924	9
10	3.642	3'434	3.558	3.026	2.827	2.634	2.447	2.267	2.094	1,020	10
1				3'048	2.843	2.645	2.422	2'272	2.094	1,031	1
	3.691	3.472	3.258						-		2
2	3.723	3°497	3.526	3.001	2.852	2.652	2.459	2.274	2.099	1'932	3
3	3.743	3.215	3.586	3.068	2.857	2.654	2,461	2.542	2.099	1,035	o l
4	3.756	3.20	3,505	3.02	2.860	2.626	2'462	2.546	2,100	89	
15	3'763	3.25	3'295	3.074	2.861	2.657	2.462	2.276	88		
6	3.767	3.22	3.297	3.075	2.861	2.657	2.462	87		20	
7	3.769	3.529	3'297	3.072	2.861	2.657	86		21	20.808	
8			3.298	3°75	2.861	85		22	20.000		
9	3.770	3.529	1		84		23		20.623	20.808	82
	3.770	3.259	3.598	3.075	0.4	24		20.434	20.623	20.808	1
20	3.771	3.230	3.598	83	25		20.241	20.434	20.623	20.808	80
1	3.771	3.230	82	26	_25_	20.044	20'047		20.623	20.808	79
2	3.771	81.	-	20	19.842		20.241	20.434		20.808	
	80		27	19.635		20.044	20'241	20'434	20.623		8
		28	19.425		19.842	20.043	20'241	20°434	20.623	20.808	7
	29	10.077	10 120	19.635	19.842	20'043	20°241	20'434	20.623	20.808	6
		19.211	19.425	19.635	19.842	20'043	20'241	20'434	20.623	20.808	5
	18.992	19'211	19.425	19.635	19.842	20'043	20,241	20.434	20.623	20.807	74
73	18.992	19.511	19.425	19.635	19.841	20'043	20'241	20°434	20.623	20.807	3
2	18.992	19'211	19.425	19.635	19.841		20'241		20.623	20.807	2
lī	18.992	10,511		19.635	19.841	20'043	20'241	20.434	20.622	20.806	1
70	18.992	1	19.425		19.841	20'043			20.622	20.805	70
		19,510	19.425	19.635	_		20°241	20'434			
69	18.992	19,510	19'425	19.635	19.841		20°240	20,433	20.620	20.804	69
8	18.992	19,510	19.425	19.635	19'841	20.045	20.530	20°432	20,010	20.803	8
7	18.992	19.510	19'424	19.635	19.840		20'238	20'430	20.617	20.799	7
6	18'992	19'210	19'424	19.634	19.839	20'040	20.237	20,428	20.614	20.794	6
5	18.991	19'210	19'423	19.633	19.838	20.039	20°234	20.425	20.609	20.789	5
64	18.991	19.200	19.423	19.632	19.836	20.036	20,531	20'420	20.604	20.782	64
3	18.990	19.208	19'421	19.630	19.834	20.033	20,532		20.296	20'773	3
2	18.989	1		19.628	19.830	20.033	20,550	,		20.762	2
1	18.088	19.207	19,419	1 -				20'407	20.284		
		19.205	19.417	19.624	19 025	20'022	20,515	20,397	20.575	20.748	1
60	18.986		19.413			20.013	20,505	20.382	20,261	20.431	60
59	18.983	19,198	19.407	19.612	19,810	20,003	50,130	20.370	20.243	20.410	59
8	18.979	19,195	19.400	19.603	19'799	19,990	20'174		20.252	20.686	8
7	18.973	19.182	19,391		19.785	19'973	20'155		20'497		7
6	18.965	19'175	19'379	19.577	19.769		20,135		20.467	20.625	6
5	18.955	19.163	19.364		19.748		20.102	20.273	20.433	20.284	5
54	18.942	19'147	1					1			54
	18:006		19.346		19.723		20'073	20'237	20.393	20.243	
3	18.926	19.128	19.324	19,212	19.694		20.032	20,100	20,348	20'494	3
2	18.906	19.102	19'297	19.482	19.659		19,003	20'149	20.592	20.439	2
1	18.882	19.077	19.262	19.446	19.619		19'944	20,006	20°240	20.377	1
50	18.823	19.044	19.558	19.404	19.573	19.735	19,889	20.036	20,149	20,300	50
	29	28	27	26	25	24	23	22	21	20	
	9	20	-/	20	23	-4	23	22	21	20	

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VALUES OF TEMPORARY ANNUITIES OF 1

31 PER

										020	
Dura-	90	91	92	93	94	95	96	97	98	99	Dura-
tion.	1.773	1.624	1.481	1.351	1:224	1.112	1.000	•910	·820	.698	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	.676	.655	.630	•608	•580	.556	.524	*500	.483	451	1
2	1,118	1.062	1,013	•960	902	.847	.785	741	701	.638	2
3	1,396	1.317	1,532	1,120	1,041	'992	912	.850	.791	.698	3
4	1.266	1.463					.969	.895	.820	99	Ŭ
			1,328	1,528	1,122	1.063			98		
5	1.664	1.243	1.423	1,300	1,199	1.094	992	.010	90	10	
6	1.418	1.286	1.455	1.334	1'214	1.102	1,000	97	II		
7	1.747	1.004	1.471	1.342	1,555	1'112	96			22.393	
8	1.461	1.614	1.478	1,320	1.224	95		12	22.256	22:404	00
9	1.468	1.622	1.481	1,321	94		13	22.114		22.393	92
10	1'771	1.624	1.481	93		14	21.967		22.256	22,393	1
1	1.772	1.624	92		15	21.816		22.114	22.256	22,333	90
2	1.773	91		16	91,000		21.967	22°114	22.526	22,393	89
	90		17	01.400	21.660	21.819	21.967	22'114	22.226	22,393	8
	====	18		21.499	21.660	21.819	21'967	22'114	22.256	22.393	7
	19		21.333	21,499	21.660	21.816	21.967	22'114	22.256	22'393	6
		21.163	21.333	21.499	21.660	21.816	21.967	22'114	22.256	22.393	5
	20.987	21.163		21,499	21'660	21'816	21.967	22'114	22.256	22.393	84
100			21'333		21.660	21'816	21'967		22.526	22.393	3
83	20.987	21,163	21.333	21,499	21.660	21.816					
2	20.987	21,163	21.333	21'499		21.816	21'967	22'114	22°256	22,393	2
1	20.987	21,163	21.333	21,499	21.660		21.967	22,113	22.525	22,393	1
80	20.987	21.163	21,333	21.499	21.660	21.819	21'967		22.522	22.392	80
79	20.987	21,163	21'333	21.498	21.659	21.812	21.966	22,113	22.224	22,301	79
8	20.984	21,193	21'333	21'498	21.659	21.812	21.966	22,115	22.253	22.389	8
7	20'987	21,163	21.333	21.498	21.659	21.814	21.962	22'111	22.252	22.384	7
6	20.987	21.163	21.332	21.498	21'658	21.814	21.964	22.100	22.220	22.382	6
5	20.987	21.165	21.332	21'497	21.657	21.812	21'962	22'107	22'247	22.381	5
74	20.987	21.165	21.332	21.496	21.656	21.811	21.960	22'104	22.243	22.376	74
3	20.987		21,331	21.496	21.654	21.808	21.957	22,100	22.538	22'370	3
2	20.986	21,191	21,350	21'493	21.652	21.805	21,023	22'095	22,531	22.362	2
1					21.648	21.801	21'947	22.088	22,553	22,323	ī
70	20.985	21.120	21.327	0	21.644	21.795		22.080	22,513	22'341	70
	20.984	21.124	21,322		1		21'940				
69	20.085	21.124	21,351	_	21.638	21.488	21,035	22'070	22'201	22.327	69
.8	20'979	21.121	21,319		21.631	21.779	21,051		22.184	22°310	8
7	20.972	21.146	21,310		21,051	21.768	21,008		22'170	22,501	7
6	20.970	21,130	21,305	21.459	21.010	21.754	21.892	22.034	22°I49	22.568	6
5	20.963	21,131	21'292	21'447	21.296	21.438	21.874	22.003	22.139	22°242	5
64	20.954	21.150	21'279	21'432	21.579	21.719	21.852	21.979	22.099	22'213	64
3	20.943	21'107	21.264	21'415	21.559	21.696	21.827	21.951	22.068	22'179	3
2	20.930	21'092	21'246		21.232	21.670	21.798	21.919	22.033	22'141	2
1	20.014	21'073	21.224	21.370		21.640	21.764	21.882	21'994	22.099	1
60	20.894	21.020	21,100	21.341	21.477	21.605	21.727		21.950		60
					21.441		21.685	21.796		22'001	59
59	20.871	21.024	21.170	21.300		21,260 51,260	21.637	21.746	21,848	21.044	8
		20'993	21,136				21.285				7
7	20.811	20'958	21.097		21.355	21.473		21.690	21.790	21.883	
6	20.775	20'918	21.023	51,185	21.304		21.22	21.629	21.725	21.812	6
5	20.733	20.872	21'004	21,150	21.247	21,329	21,464	21.263	21.655	21'742	5
54	20.086	20.851	20'949	21.040	21,182	21.593	21,392	21.490	21.280	21.663	54
3	20.633	20.764	20.888	21,000	21.114	21,551	51,319	21.411	21.498	21.248	3
2	20.23	20'701	20.821	20.935	21'042	21.143	21'237	21.326	21'410	21'487	2
1	20.208	20.631	20'747	20.857	20'960	21.028	21'149	21.235	21.312	21.390	1
50	20.435	20.554	20.667	20'773	20.872	20,966	21'054	21.136	21,513	21.582	50
	19	18	17	16	15	14	13	12	II	10	
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4 PER CENT.

CONSTANTS.

Constant.	Number.	Logarithm.
$i \\ (1+i) \\ (1+i)^{\frac{1}{2}} \\ (1+i)^{\frac{1}{2}} \\ v $	'04 1'04 1'019 803 9 1'009 853 4 '961 538 5	2.602 060 0 0.017 033 3 0.008 516 7 0.004 258 3 T.982 966 7
ν [‡] ν [‡] d	·980 580 7 ·990 242 7 ·038 461 5 ·039 220 7	ī·991 483 3 ī·995 741 7 2·585 026 7 2·593 515 5

0M

COMMUTATION TABLE

4 PER CENT.

x	D_x	\mathbb{N}_x	S_x	\mathbf{C}_x	M_x	R_x	x
10 11 12 13 14	67 556 64 739 62 036 59 444 56 958	1 449 087 1 381 531 1 316 792 1 254 756 1 195 312	26 726 153 25 277 066 23 895 535 22 578 743 21 323 987	219.56 212.36 206.00 199.81 193.79	11 822'54 11 602'98 11 390'62 11 184'62 10 984'81	421 160°55 409 338°01 397 735°03 386 344'41 375 159'79	10 11 12 13 14
15 16 17 18 19	54 574 52 286 50 090 47 983 45 961	1 138 354 1 083 780 1 031 494 981 404 933 421	20 128 675 18 990 321 17 906 541 16 875 047 15 893 643	189°00 184°30 180°67 176°57	10 791°02 10 602°02 10 417°72 10 237°05 10 060°48	364 174 98 353 383 96 342 781 94 332 364 22 322 127 17	15 16 17 18 19
20 21 22 23 24	44 020 42 156 40 366 38 646 36 994	887 460 843 440 801 284 760 918 722 272	14 960 222 14 072 762 13 229 322 12 428 038 11 667 120	171°15 168°78 167°16 165°80 164°68	9 887.05 9 715.90 9 547.12 9 379.96 9 214.16	312 066.69 302 179.64 292 463.74 282 916.62 273 536.66	20 21 22 23 24
25 26 27 28 29	35 406 33 881 32 415 31 005 29 650	685 278 649 872 615 991 583 576 552 571	10 944 848 10 259 570 9 609 698 8 993 707 8 410 131	163.75 163.00 163.07 162.25 162.18	9 049 48 8 885 73 8 722 73 8 559 66 8 397 41	264 322.50 255 273.02 246 387.29 237 664.56 229 104.90	25 26 27 28 29
30 31 32 33 34	28 347 27 095 25 891 24 734 23 622	522 921 494 574 467 479 441 588 416 854	7 857 560 7 334 639 6 840 065 6 372 586 5 930 998	162'16 161'63 161'44 161'03	8 235.23 8 073.07 7 911.44 7 750.00 7 588.97	220 707'49 212 472'26 204 399'19 196 487'75 188 737'75	30 31 32 33 34
35 36 37 38 39	22 553 21 525 20 538 19 589 18 678	393 232 370 679 349 154 328 616 309 027	5 514 144 5 120 912 4 750 233 4 401 079 4 072 463	160°09 159°56 158°83 157°92	7 428·56 7 268·47 7 108·91 6 950·08 6 792·16	181 148.78 173 720.22 166 451.75 159 342.84 152 392.76	35 36 37 38 39
40 41 42 43 44	17 802 16 961 16 152 15 376 14 629	290 349 272 547 255 586 239 434 224 058	3 763 436 3 473 087 3 200 540 2 944 954 2 705 520	156.62 155.99 155.54 154.90 154.59	6 634.69 6 478.07 6 322.08 6 166.54 6 011.64	145 600.60 138 965.91 132 487.84 126 165.76 119 999.22	40 41 42 43 44
45 46 47 48 49	13 912 13 223 12 560 11 923 11 310	209 429 195 517 182 294 169 734 157 811	2 481 462 2 272 033 2 076 516 1 894 222 1 724 488	154.24 154.17 154.24 154.64	5 857.05 5 702.81 5 548.64 5 394.47 5 240.23	113 987.58 108 130.53 102 427.72 96 879.08 91 484.61	45 46 47 48 49
50 51 52 53 54	10 720 10 153 9 606.6 9 080.8 8 574.4	146 501 135 781 125 627.6 116 021.0 106 940.2	1 566 677 1 420 176 1 284 394 5 1 158 766 9 1 042 745 9	155°05 155°73 156'37 157'09 158'10	5 085.59 4 930.54 4 774.81 4 618.44 4 461.35	86 244'38 81 158'79 76 228'25 71 453'44 66 835'00	50 51 52 53 54

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COMMUTATION TABLE

4 PER

x	D_x	\mathbb{N}_x	\mathbb{S}_x	C_x	\mathbf{M}_x	R_x	x
55	8 086.5	98 365.8	935 805.7	159.03	4 3°3°25	62 373.65	55
56	7 616.5	90 279.3	837 439.9	159.03	4 144°22	58 070.40	56
57	7 163.6	82 662.8	747 160.6	161.01	3 984°25	53 926.18	57
58	6 727.0	75 499.2	664 497.8	162.04	3 823°24	49 941.93	58
59	6 306.3	68 772.2	588 998.6	163.03	3 661°20	46 118.69	59
60 61 62 63 64	5 900.7 5 509.9 5 133.5 4 771.0 4 422.2	62 465 9 56 565 2 51 055 3 45 921 8 41 150 8	520 226'4 457 760'5 401 195'3 350 140'0 304 218'2	163.80 164.53 165.04 165.28	3 498·17 3 334·37 3 169·84 3 004·80 2 839·52	42 457 49 38 959 32 35 624 95 32 455 11 29 450 31	60 61 62 63 64
65 66 67 68 69	4 086.9 3 764.8 3 455.9 3 160.2 2 877.6	22 260.8 36 728.6 32 641.7 28 876.9	263 067.4 226 338.8 193 697.1 164 820.2 139 399.2	164'91 164'05 162'81 161'03	2 674°27 2 509°36 2 345°31 2 182°50 2 021°47	26 610'79 23 936'52 21 427'16 19 081'85 16 899'35	65 66 67 68 69
70 71 72 73 74	2 608·3 2 352·3 2 109·8 1 880·9 1 665·8	19 383°2 16 774°9 14 422°6 12 312°8 10 431°9	97 755 ² 80 980 ³ 66 557 ⁷ 54 244 ⁹	155.67 152.06 147.69 142.73 136.92	1 862.78 1 707.11 1 555.05 1 407.36 1 264.63	14 877 88 13 015 10 11 307 99 9 752 94 8 345 58	70 71 72 73 74
75	1 464'9	8 766·1	43 813°0	130'49	1 127.71	7 080°95	75
76	1 278'0	7 301·2	35 046°9	123'42	997.22	5 953°24	76
77	1 105'5	6 023·2	27 745°7	115'67	873.80	4 956°02	77
78	947'26	4 917·69	21 722°52	107'43	758.13	4 082°22	78
79	803'41	3 970·43	16 804°83	98'744	650.695	3 324°091	79
80	673'76	3 167°02	12 834'40	89.689	551'951	2 673.396	80
81	558'16	2 493°26	9 667'38	80.503	462'262	2 121.445	81
82	456'18	1 935°10	7 174'12	71.236	381'759	1 659.183	82
83	367'40	1 478°92	5 239'02	62.081	310'523	1 277.424	83
84	291'19	1 111°52	3 760'10	53.239	248'442	966.901	84
85	226.76	820°33	2 648·58	44.848	195°203	718.459	85
86	173.18	593°57	1 828·25	36.990	150°355	523.256	86
87	129.53	420°39	1 234·68	29.894	113°365	372.901	87
88	94.658	290°855	814·289	23.562	83°471	259.536	88
89	67.455	196°197	523·434	18.084	59°909	176.065	89
90	46.777	128·742	327'237	13.527	41°825	116·156	90
91	31.451	81·965	198'495	9.755 3	28°298 4	74·330 6	91
92	20.486	50·514	116'530	6.852 7	18°543 1	46·032 2	92
93	12.845	30·028	66'016	4.584 8	11°690 4	27·489 1	93
94	7.766 5	17·182 9	35'988 2	2.987 1	7°105 6	15·798 7	94
95 96 97 98 99	4.480 7 2.478 5 1.291 8 .642 5 .308 9	9'416 4 4'935 7 2'457 2 1'165 4 '522 9	18 [.] 805 3 9 [.] 388 9 4 [.] 453 ² 1 [.] 996 0 [.] 830 6	1.829 9 1.091 3 .599 6 .308 9	4°118 5 2°288 6 1°197 3 °597 7 °288 8	8.693 1 4.574 6 2.286 0 1.088 7	97 98 99
100	°1386	°214 0	°307 7	°076 2	°130 4	°202 2	101
101	°0571	°075 4	°093 7	°036 6	°054 2	°07 1 8	
102	°0183	°018 3	°018 3	°017 6	°017 6	°017 6	

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LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x 4 per cent.

x	$\log D_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	col C _x	$\operatorname{col} \mathbf{M}_x$	x
10	4.829 67	6'161 10 '140 36 '119 52 '098 56 '077 48	2°341 55	4'072 71	5'170 33	7·838 90	3.658 45	5.927 29	10
11	.811 16		°327 08	'064 57	'188 84	·859 64	.672 92	.935 43	11
12	.792 65		°313 86	'056 55	'207 35	·880 48	.686 14	.943 45	12
13	.774 11		°300 61	'048 62	'225 89	·901 44	.699 39	.951 38	13
14	.755 56		°287 33	'040 79	'244 44	·922 52	.712 67	.959 21	14
15	'736 98	.056 28	276 47	'033 06	'263 02	'943 72	'723 53	966 94	15
16	'718 38	.034 94	265 53	'025 39	'281 62	'965 06	'734 47	974 61	16
17	'699 75	.013 47	256 88	'017 77	'300 25	'986 53	'743 12	982 23	17
18	'681 09	5.991 85	246 91	'010 17	'318 91	6'008 15	'753 09	989 83	18
19	'662 39	.970 08	239 12	'002 62	'337 61	'029 92	'760 88	997 38	19
20	'643 65	'948 15	233 36	3.995.07	356 35	'051 85	766 64	4.004 93	20
21	'624 86	'926 05	227 33	.987.48	375 14	'073 95	772 67	.012 52	21
22	'606 01	'903 78	223 13	.979.87	393 99	'096 22	776 87	.020 13	22
23	'587 10	'881 34	219 59	.972.20	412 90	'118 66	780 41	.027 80	23
24	'568 13	'858 70	216 63	.964.46	431 87	'141 30	783 37	.035 54	24
25	'549 08	'835 87	'214 19	'956 62	'450 92	'164 13	785 81	°043 38	25
26	'529 95	'812 83	'212 20	'948 69	'470 05	'187 17	787 80	°051 31	26
27	'510 74	'789 57	'212 38	'940 65	'489 26	'210 43	787 62	°059 35	27
28	'491 43	'766 10	'210 18	'932 46	'508 57	'233 90	789 82	°067 54	28
29	'472 02	'742 39	'209 99	'924 14	'527 98	'257 61	790 01	°075 86	29
30	'452 51	'718 44	'209 95	'915 67	*547 49	'281 56	790 05	°084 33	30
31	'432 89	'694 23	'208 52	'907 04	*567 11	'3°5 77	791 48	°092 96	31
32	'413 15	'669 76	'208 02	'898 25	*586 85	'33° 24	791 98	°101 75	32
33	'393 29	'645 02	'206 91	'889 30	*606 71	'354 98	793 09	°110 70	33
34	'373 31	'619 98	'205 24	'880 18	*626 69	'38° 02	794 76	°119 82	34
35	'353 20	'594 65	'204 37	*870 91	.646 80	'405 35	'795 63	'129 09	35
36	'332 95	'569 00	'202 91	*861 44	.667 05	'431 00	'797 09	'138 56	36
37	'312 55	'543 01	'200 92	*851 80	.687 45	'456 99	'799 08	'148 20	37
38	'292 01	'516 69	'198 43	*841 99	.707 99	'483 31	'801 57	'158 01	38
39	'271 32	'490 00	'197 19	*832 01	.728 68	'510 00	'802 81	'167 99	39
40 41 42 43 44	'250 46 '229 44 '208 23 '186 83 '165 22	'462 92 '435 44 '407 54 '379 19 '350 36	194 84 193 08 190 05 189 19	.821 82 .811 45 .800 86 .790 04 .778 99	'749 54 '770 56 '791 77 '813 17 '834 78	'537 08 '564 56 '592 46 '620 81 '649 64	·805 16 ·806 92 ·808 15 ·809 95 ·810 81	178 18 188 55 199 14 209 96 221 01	40 41 42 43 44
45	'143 39	'321 04	188 21	767 68	*856 61	678 96	·811 79	°232 32	45
46	'121 32	'291 18	187 99	756 09	*878 68	708 82	·812 01	°243 91	46
47	'098 99	'260 77	188 01	744 18	*901 01	739 23	·811 99	°255 82	47
48	'076 37	'229 77	188 21	731 95	*923 63	770 23	·811 79	°268 05	48
49	'053 46	'198 13	189 33	719 35	*946 54	801 87	·810 67	°280 65	49
50	'030 20	'165 84	'190 48	'706 34	°969 80	*834 16	·809 52	293 66	50
51	'006 59	'132 84	'192 36	'692 89	°993 41	*867 16	·807 64	307 11	51
52	3'982 57	'099 09	'194 14	'678 96	4°017 43	*900 91	·805 86	321 04	52
53	'958 12	'064 53	'196 14	'664 49	°041 88	*935 47	·803 86	335 51	53
54	'933 20	'029 14	'198 93	'649 47	°066 80	*970 86	·801 07	350 53	54
			TAT .	- D + T					

 $\mathbb{N}_x = \mathbb{D}_x + \mathbb{D}_{x+1} + \dots$ $S_x = N_x + N_{x+1} + \dots$

OM LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x 4 PER CENT.

x	$\log D_x$	$\log \mathbb{N}_x$	$\log C_x$	$\log M_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	col C _x	$\operatorname{col} \mathbf{M}_x$	x
55	2:007.76	1:002 85	0'20T 47	3.633 80	-:002.24	5.007 12	3.798 53	4.366 20	55
56	3.907 76	4.992 85	2'201 47		1.092 24	_	1	382 56	56
	.881 75	955 59	204 03	617 44	118 25	'044 41	795 97		57
57	855 13	917 31	206 86	600 35	144 87	082 69	'793 14	399 65	
58	827 82	877 94	.500 61	582 43	172 18	122 06	790 39	417 57	58
59	'799 77	'837 41	'212 26	'563 62	'200 23	162 59	.787 74	'436 38	59
60	770 90	'795 64	'214 30	'543 84	229 10	'204 36	.785 70	456 16	60
61	'741 15	752 55	'216 24	'523 01	.25885	247 45	783 76	476 99	61
62	'710 41	'708 04	217 60	501 04	289 59	291 96	'782 40	498 96	62
63	67861	.662 02	218 22	477 82	'321 39	'337 98	781 78	'522 18	63
64	.645 64	614 38	'218 14	453 24	354 36	'385 62	781 86	.546 76	64
QE		_			.388 61		.782 77		65
65	611 39	.265 01	'217 23	'427 21		434 99		572 79	66
66	575 74	513 77	214 98	399 56	424 26	486 23	785 02	600 44	67
67	538 57	.460 55	211 69	370 20	'461 43	539 45	'788 31	629 80	
68	499 72	405 19	206 90	338 95	'500 28	.59481	'793 10	661 05	68
69	459 04	347 54	200 54	.305 67	°540 96	652 46	'799 46	.694 33	69
70	'416 35	'287 42	192 21	270 16	.283 65	.412 28	.807 79	.729 84	70
71	371 49	*224 66	182 01	*232 26	.628 51	'775 34	817 99	.767 74	71
72	324 23	159 04	'169 36	191 74	675 77	·840 96	.830 64	.808 26	72
73	274 37	*090 36	154 51	148 41	725 63	909 64	*845 49	851 59	73
74	.221 63	.018 36	136 47	.101 96	.778 37	981 64	.863 53	'898 04	74
75	165 79	3.942 81	115 57	.052 19	.834 21	4.057 19	.884 43	947 81	75
76	105 79	'863 39	.091 38	2.998 49	.893 46	136 61	908 62	3.001 51	76
77	043 54	779 83	.063 22		956 46	220 17	936 78	.028 20	77
78		691 76	_	941 41			930 70	.150 59	78
79	2.976 47	.598 84	.031 13	879 74	3.023 53	308 24	2.002 49	186 62	79
	'904 93		1.994 21	.813 38	.092 04				
80	.828 50	.200 62	952 74	'741 90	171 50	499 35	*047 26	.528 10	80
81	'746 76	'396 77	.002 81	.664 89	253 24	.603 23	094 19	'335 11	81
82	659 14	286 70	.852 70	.281 79	'340 86	'713 30	147 30	'418 21	82
83	'565 14	169 94	792 95	'492 09	·434 86	*830 06	207 05	.207 91	83
84	'464 18	'045 92	'726 23	395 22	'535 82	°954 o8	273 77	.604 78	84
85	355 56	2.913 99	651 74	'290 49	.644 44	3.089 oi	*348 26	'709 51	85
86	238 51	773 47	.568 09	177 12	'761 49	*226 53	'431 91	822 88	86
87	112 38	623 65	475 58	.054 48	887 62	376 35	524 42	'945 52	87
88	1.976 16	'463 68	372 21	1'921 54	2.023 84	536 32	627 79	2.078 46	88
89	'829 01	292 69	257 28	777 49	170 99	707 31	742 72	222 51	89
90	670 03			621 44		890 28	.868 79	378 56	90
91		109 72	131 21		329 97	2.086 37	1.010 16	*548 24	91
	497 63	1'913 63	0.989 24	'451 76	'502 37	296 59			92
92	'311 45	703 41	*835 86	268 18	688 55	, ,,	164 14	731 82	93
93	108 75	477 53	661 32	067 83	·891 25	522 47	338 68	932 17	94
94	0.890 23	'235 10	475 25	0.821 60	1.100 22	'764 90	524 75	1.148 40	
95	.651 35	0.973 88	'262 43	61474	'348 65	1.059 15	737 57	'385 26	95
96	'394 18	'693 35	.037 96	359 57	605 82	.306 62	962 04	'640 43	96
97	.111.10	*390 44	1.777 89	.078 20	.88881	.609 56	0.555 11	.921 80	97
98	1.807 85	.066 48	489 79	1.776 48	0.195 12	933 52	'510 21	0.553 25	98
99	'489 79	1.418 42	199 76	'460 60	'510 21	0.581 28	·800 24	*539 40	99
100	141 76	'330 41	2.881 69	115 28	858 24	.669 59	1,118 31	.884 72	100
101	2.756 75	2.877 37	.563 63	2.734 00	1.243 25	1.155 63	'436 37		101
102	262 60	262 60	245 57	245 57	737 40	737 40	754 43		102
	1	1	.557						

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VALUES OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

x	α_x	\mathbf{A}_x	P_x	\overline{a}_x	$ar{ ext{A}}_x$	$\overline{\mathrm{P}}_{x}$	x
10 11 12 13 14	20'450 20'340 20'226 20'108 19'986	'17 500 '17 923 '18 361 '18 815 '19 285	°00 816 °00 840 °00 865 °00 891 °00 919	20'946 20'836 20'722 20'604 20'482	'17 848 '18 280 '18 727 '19 190 '19 668 '20 166	'00 852 '00 877 '00 904 '00 931 '00 960	10 11 12 13 14
16 17 18 19	19°728 19°593 19°453 19°309	°20 277 °20 798 °21 334 °21 889	°00 978 °01 010 °01 043 °01 078	20°224 20°089 19°949 19°805	*20 680 *21 210 *21 759 *22 323	°01 023 °01 056 °01 091 °01 127	16 17 18 19
20 21 22 23 24	19°160 19°007 18°851 18°690	'22 461 '23 047 '23 652 '24 272 '24 907	'01 114 '01 152 '01 191 '01 233 '01 276	19.656 19.503 19.186 19.186	°22 908 °23 508 °24.120 °24 751 °25 402	'01 165 '01 205 '01 247 '01 290 '01 336	20 21 22 23 24
25 26 27 28 29	18.355 18.181 18.004 17.822	'25 559 '26 226 '26 910 '27 608 '28 322	'01 321 '01 367 '01 416 '01 467 '01 520	18.851 18.677 18.500 18.318	26 065 26 747 27 442 28 155 28 881	'01 383 '01 432 '01 483 '01 537 '01 593	25 26 27 28 29
30 31 32 33 34	17'447 17'253 17'056 16'854 16'647	'29 051 '29 795 '30 556 '31 334 '32 127	'01 575 '01 632 '01 692 '01 755 '01 821	17.943 17.749 17.552 17.350 17.143	'29 626 '30 387 '31 160 '31 952 '32 764	'01 651 '01 712 '01 775 '01 842 '01 911	30 31 32 33 34
35 36 37 38 39	16.436 16.220 16.001 15.776 15.545	'32 939 '33 767 '34 614 '35 4 ⁸ 0 '36 366	*01 889 *01 961 *02 036 *02 115 *02 198	16'932 16'716 16'272 16'041	33 591 34 439 35 298 36 180 37 086	°01 984 °02 060 °02 140 °02 223 °02 312	35 36 37 38 39
40 41 42 43 44	15'310 15'070 14'824 14'572 14'316	'37 270 '38 195 '39 141 '40 106 '41 093	°02 285 °02 377 °02 474 °02 575 °02 683	15.806 15.566 15.320 15.068 14.812	'38 008 '38 949 '39 914 '40 902 '41 906	°02 405 °02 502 °02 605 °02 715 °02 829	40 41 42 43 44
45 46 47 48 49	14.054 13.786 13.514 13.236 12.953	'42 101 '43 129 '44 176 '45 246 '46 333	°02 797 °02 917 °03 044 °03 178 °03 321	14.550 14.282 14.010 13.732 13.449	'42 934 '43 985 '45 052 '46 142 '47 252	°02 951 °03 080 °03 216 °03 360 °03 513	45 46 47 48 49
50 51 52 53 54	12.666 12.374 12.077 11.777 11.472	'47 439 '48 562 '49 704 '50 859 '52 032	*03 471 *03 631 *03 801 *03 981 *04 172	13'162 12'869 12'572 12'967	'48 378 '49 527 '50 692 '51 868 '53 065	°03 676 °03 849 °04 032 °04 227 °04 434	50 51 52 53 , 54

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VALUES OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

x	a_x	A_x	P_x	\overline{a}_x	$ar{\mathrm{A}}_x$	$\overline{\mathrm{P}}_{x}$	x
55 56	11°164	°53 216	°04 375	11.659	54 273 55 492	°04 655	55 56
57	10.239	.22 619	. 04 820	11.034	.56 724	'05 141	57
58 59	9'905	•56 834 •58 056	°05 064 °05 324	10'718 10'400	'57 963 '59 210	°05 408 °05 693	58 59
60	9.586	·59 284	.02 600	10.080	·6o 466	°05 999	60
61 62	9°266 8°946	.60 515	°05 895 °06 209	9°760 9°440	.61 720 .62 977	*06 324 *06 672	61 62
63	8.625	62 981	06 543	9,119	64 235	°07 044	63 64
64 65	8·306 7·987	·64 210 ·65 436	°06 900	8·799 8·480	.65 489 .66 740	°07.443	65
66	7.670	.66 653	·07 688	8.163	.67 983	'08 328	66
68	7°356 7°044	·67 863 ·69 061	°08 122	7.848 7.536	.69 218 .70 442	*08 820 *09 347	67 68
69	6.736	.70 247	.09 081	7.228	71 652	°09 914	69
70 71	6.431 6.131	.71 418 .72 572	°09 610	6.623 6.623	.72 847 .74 026	'10 522 '11 178	70 71
72	5.836	. 73 707	10 782	6.327	.75 185	.11 883	72
73 74	5°546 5°262	.74 824 .75 915	'11 430 '12 123	6.036 5.752	'76 325 '77 440	12 644 13 463	73 74
75	4.984	.76 984	12 864	5'473	.78 533	14 348	75
76 77	4'713	.78 028 .79 044	°13 658	5°201 4°936	.79 601 .80 640	°15 304 °16 337	76 77
78	4°449 4°191	·80 033	15 416	4.678	.81 652	17 454	78
79	3'942	·80 993	.16 389	4.428	*82 634	18 663	79
80	3°701 3°467	.81 922 .82 819	°17 428 °18 540	3.321 3.321	.83 585 .84 505	°19 971 °21 390	80 81
82	3.545	83 685	19 728	3.724	·85 392 ·86 246	22 927	82 83
83 84	3°025 2°817	.84 518 .85 318	.20 997 .22 321	3°5°7 3°297	·87 o69	°24 595 °26 408	84
85	2.618	·86 o86	·23 796	3.096	.87 857	.28 378	85
86	2°427 2°245	·86 818 ·87 519	°25 331 °26 967	2 . 304 2.420	·88 610	*30 512 *32 839	86 87
88	2.073	.88 183	·28 699 _.	2.246	.00 019	.35 361	88 89
89	1.752	·88 814 ·89 415	°3° 535	2°379 2°221	°90 668	.38 107 .41 111	90
91	1.606	·89 977	34 525	2.072	'91 875	°44 347	91
92 93	1°466 1°338	'90 517 '91 008	°36 709	1°929 1°797	.92 436 .92 951	°47 932 °51 717	92 93
94	1,515	91 489	41 352	1.669	93 456	.56 008	94
95 96	1,105	'91 916	.43 738 .46 368	1°554	°93 9°5 °94 353	.60 432 .65 537	95 96
96	*991 *902	.92 340 .92 685	.48 726	1 . 440	94 721	.40 378	97
98 99	·814 ·693	'93 031	°51 286	1°253	*95 087 *95 583	. *75 906 *84 872	98 99
100	*544	°93 500	60 935	972	.06 100	99 006	100
101	.321	·94 896	·71 884	.742	·97 0 91	1,30 955	101
102	*000	·96 154	·96 154	. 414	·98 376	2°37 612	102

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LOGARITHMS OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x 4 CENT.

x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
10 11 12 13 14 15 16 17 18	1°331 43 °329 20 °326 87 °324 45 °321 92 °316 56 °313 72 °310 76	1.243 04 .253 4 1 .263 90 .274 51 .285 23 .296 08 .307 01 .318 02 .329 08	3'911 61 '924 21 '937 03 '950 06 '963 31 '976 78 '990 45 2'004 30 '018 32	1 321 10 318 81 316 43 313 95 311 37 308 67 305 87 302 96 299 92	7.251 59	3.930 50 .943 16 .956 03 .969 12 .982 39 .995 96 2.009 66 .023 58 .037 71	10 11 12 13 14 15 16 17 18
19 20 21 22 23 24	307 69 304 50 301 19 297 77 294 24 290 57	'340 23 '351 42 '362 62 '373 86 '385 10 '396 33	°032 54 °046 92 °061 43 °076 09 °090 86 °105 76	296 77 293 50 290 10 286 61 282 98 279 21	'348 75 '359 99 '371 22 '382 38 '393 59 '404 87	'052 00 '066 48 '081 10 '095 76 '110 62 '125 68	19 20 21 22 23 24
25 26 27 28 29 30	286 79 282 88 278 83 274 67 270 37 265 93	407 54 418 74 429 91 441 03 452 12 463 16	'120 75 '135 86 '151 08 '166 36 '181 75	275 33 271 31 267 17 262 88 258 47	'416 06 '427 28 '438 42 '449 56 '460 61	'140 73 '155 97 '171 23 '186 67 '202 13	25 26 27 28 29
31 32 33 34 35 36	'261 34 '256 61 '251 73 '246 67 '241 45 '236 05	*474 15 *485 10 *496 01 *506 87 *517 71 *528 49	*212 81 *228 49 *244 28 *260 20 *276 26 *292 44	*249 17 *244 33 *239 30 *234 09 *228 71 *223 13	*482 69 *493 60 *504 50 *515 40 *526 22 *537 05	'233 50 '249 27 '265 20 '281 31 '297 52 '313 91	31 32 33 34 35 36
37 38 39 40 41	230 46 224 68 218 68 212 46 206 00	539 25 539 25 549 98 560 69 571 36 582 01	308 79 325 30 342 01 358 90 376 01	223 73 217 41 211 44 205 23 198 82	547 75 558 47 569 21 579 88	330 33 347 04 363 99 381 04 398 32	37 38 39 40 41
42 43 44 45 46	'199 31 '192 36 '185 14 '177 65 '169 86	'592 63 '603 21 '613 77 '624 29 '634 77	393 32 *410 85 *428 63 *446 64 *464 91	185 26 178 06 170 61 162 86 154 79	601 13 611 74 622 28 632 80 643 30	'415 86 '433 69 '451 66 '469 94 '488 51	42 43 44 45 46
47 48 49 50 51 52	'161 78 '153 40 '144 67 '135 64 '126 25 '116 52	645 19 655 58 665 89 676 14 686 30	'483 41 '502 18 '521 22 '540 50 '560 05	146 44 137 73 128 69 119 32 109 54	653 71 664 10 674 42 684 65 694 84 704 94	507 28 526 37 545 73 565 33 585 29 605 53	47 48 49 50 51 52
53 54	110 52	°696 39 °706 37 °716 27	579 87 599 96 620 33	099 40 088 92 077 99	704 94 '714 90 '724 81	625 99 646 82	53 54

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logarithms of a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

4 PER

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x	$\log a_x$	$\log \mathrm{A}_x$	$\log P_x$	$\log \bar{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{P}_x$	x
55	1.085 09	7.726 04	2·640 95	1°066 66 °054 92 °042 73 °030 11 °017 03	7.734 58	2.667 92	55
56	.073 84	7.735 69	·661 85		744 23	.689 32	56
57	.062 18	7.745 22	·683 04		753 77	.711 03	57
58	.050 12	7.754 61	·704 49		763 15	.733 04	58
59	.037 64	7.763 85	·726 21		772 40	.755 36	59
60	'024 74	772 94	.748 20	°003 46	781 51	.778 05	60
61	'011 40	781 86	.770 46	0°989 46	790 43	.800 96	61
62	0'997 63	790 63	.793 00	°974 95	799 18	.824 23	62
63	'983 41	799 21	.815 80	'959 95	807 77	.847 82	63
64	'968 74	807 60	.838 86	'944 44	816 17	.871 72	64
65	'953 62	'815 82	·862 20	928 41	824 39	·895 98	65
66	'938 03	'823 82	·885 79	911 87	832 40	·920 54	66
67	'921 98	'831 63	·909 65	894 78	84 0 22	·945 44	67
68	'905 47	'839 23	·933 76	877 16	847 83	·970 67	68
69	'888 50	'846 63	·958 13	859 00	855 23	·996 23	69
70	·871 07	*853 81	'982 74	.840 30	*862 41	7.022 10	70
71	·853 17	*860 77	T'007 60	.821 02	*869 38	.048 36	71
72	·834 81	*867 51	'032 70	.801 19	*876 13	.074 93	72
73	·815 99	*874 04	'058 05	.780 77	*882 67	.101 88	73
74	·796 73	*880 33	'083 60	.759 82	*888 97	.129 14	74
75 76 77 78 79	777 02 756 85 736 29 715 29 693 91	*886 40 *892 25 *897 87 *903 27 *908 45	'109 38 '135 40 '161 58 '187'98 '214 54	'738 25 '716 10 '693 38 '670 08 '646 19	*895 05 *900 92 *906 55 *911 97 *917 16	156 79 184 81 213 17 241 90	75 76 77 78 79
80	672 15	'913 40	'241 25	.621 74	'922 13	'300 40	80
81	650 01	'918 13	'268 12	.596 67	'926 88	'330 21	81
82	627 56	'922 65	'295 09	.571 07	'931 42	'360 35	82
83	604 80	'926 95	'322 15	.544 90	'935 74	'390 85	83
84	581 74	'931 04	'349 30	.518 13	'939 86	'421 74	84
85	558 43	'934 93	'376 50	'490 80	943 78	'452 98	85
86	534 96	'938 61	'403 65	'463 01	947 48	'484 47	86
87	511 27	'942 10	'430 83	'434 62	951 00	'516 39	87
88	487 52	'945 38	'457 86	'405 79	954 32	'548 52	88
89	463 68	'948 48	'484 80	'376 45	957 45	'581 00	89
90	'439 69	'951 41	°511 72	346 47	'960 43	'613 96	90
91	'416 00	'954 13	°538 13	316 33	'963 20	'646 86	91
92	'391 96	'956 73	°564 77	285 22	'965 84	'680 63	92
93	'368 78	'959 08	°590 30	254 62	'968 25	'713 63	93
94	'344 87	'961 37	°616 50	222 35	'970 61	'748 25	94
95 96 97 98 99	'322 53 '299 17 '279 25 '258 63 '228 63	'963 39 '965 39 '967 01 '968 63 '970 81	.640 86 .666 22 .687 76 .710 00 .742 18	191 42 158 27 129 01 097 85	'972 69 '974 76 '976 45 '978 12 '980 38	.781 27 .816 49 .847 44 .880 28 .928 76	95 96 97 98 99
100	°188 65	'973 52	°784 87	7.987 47	983 13	'995 66	100
101	°120 62	'977 25	°856 63	.870 17	987 18	0'117 01	101
102	°000 00	'982 97	°982 97	.617 02	992 89	'375 86	102

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VALUES OF TEMPORARY ANNUITIES OF 1

,	10	II	12	13	14	15	16	17	18	19	Dura-
Dura- tion.	20.450	20.340	20.226	20.108	19.986	19.859	19.728	19:593	19.453	19:309	tion.
0	000°	.000	.000	*000	*000	*000	,000	,000	.000	.000	0
1	. 958	.958	*958	.958	958	*958	.928	.928	. 958	'958	1
2	1.877	1.876	1.846	1.876	1.876	1.876	1.876	1.876	1.875	1.875	2
3	2.757	2.756	2.756	2.756	2'756	2.755	2.755	2.754	2.754	2.753	3 4
4	3.000	3.259	3.299	3.298	3.298	3.597	3.59%	3.296	3.255	3'594	
5	4.407	4.407	4°406	4.406	4°4°5 5°178	5.176	4°4°3	4°402 5°173	4°400 5°171	4.3 99	5 6
6 7	5.181	5'181	5.921	5.179	2.018	5.016	5'914	5,015	2.909	2.002	7
8	6.633	6.632	6.630	6.629	6.627	6.624	6.622	6.619	6.612	6 612	8
9	7.313	7'312	7.310	7.308	7.305	7.302	7.299	7.295	7.291	7.286	9
10	7.965	7'963	7.961	7.958	7'955	7.951	7.947	7.942	7.937	7.931	10
1	8.589	8.286	8.283	8.280	8.576	8.572	8.267	8.261	8.222	8.248	1
2	9.184	6.183	9,180	9.176	9,141	9,166	0,160	9.123	9'146	9,138	2
3	9.759	9.755	9.421	9.746	9'740	9.734	9.727	9,419	9.711	9'701	3 4
4	10.306	10,305	10°297	10,501	10'284	10.574	-	· · · · · · · · · · · · · · · · · · ·		10,530	
15	10.830	10.825	10.819	10.813	10.802	10'796	10.787	10'777	10.766	10.753	15
6	11.332	11.805	11.319	11.488	11.778	11.767	11.755	11.742	11.458	11.412	7
8	12.271	12.263	12.224	12'244	12'233	12.551	12.502	12.193	12.177	12.159	8
9	12.710	12.700	12.691	12.680	12.667	12.653	12.638	12.622	12.602	12.282	9
20	13'129	13.110	13,108	13.096	13.082	13.067	13.020	13.035	13.013	12'992	20
1	13.230	13.219	13.207	13.493	13.478	13.461	13.443	13.423	13.402	13'379	1
2	13.914	13.001	13.888	13.872	13.856	13.837	13.818	13.796	13.773	13'748	2
3	14.280	14.266	14.221	14'235	14.216	14.139	14.175	14.12	14'127	14.434	3 4
4	14.629	14.614	14.298	14.280	14.888	14.865	14.840	14.813	14.784	14.752	25
25 6	14.963	14'947	14.929	14.910	15.201	15.176	15'149	15.150	12,089	15.055	6
7	15.286	15.264	15.249	15.253	15.499	15.472	15'443	15'412	15.378	15'343	7
8	15.876	15.855	15.833	15.809	15.782	15.753	15'722	15.690	15.654	15.616	8
9	16.125	16.130	16.109	16.080	16.025	16.051	15.989	15.954	15.916	15.875	9
30	16.416	16.395	16.367	16'339	16.309	16.276	16.541	16.504	16.164	16.151	30
1	16.664	16.642	16.612	16.282	16.223	16.219	16.482	16.442	16.400	16.355	1 2
2	16.906	16:879	16.850	16.819	16.785	16.749	16.410	16.882	16.835	16.784	3
3 4	17.133	17.102	17.075	17.042	17.215	17.174	17.131	17.085	17'035	16.982	4
35	17.226	17.524	17'490	17.453	17.414	17.371	17.325	17.277	17.224	17.169	35
6	17.752	17.718	17.682	17.644	17.602	17.557	17.209	17.458	17.403	17.345	6
7	17.938	17.902	17.865	17.824	17.780	17.733	17.683	17.629	17.572	17.210	7
8	18.114	18.077	18.038	17.995	17.949	17.899	17.847	17.791	17.730	17.666	8 9
9	18.585	18.243	18.301	18.126		18.056	18.001	17'943	17.880	17.813	
40	18.440	18.399	18.356	18.309	18.259		18.147	18.086	18.020	18.048	40
1 2	18.231	18.248	18.202	18.453	18.401	18.344	18.284	18.346	18.274	18.198	2
3	18.867		18.771	18.718		18.299	18.233	18.464	18.389	18.310	3
4	18.994		18.894	18.838	18.778		18.646	18.574	18.496	18.414	4
45	19.114		19.009	18.951	18.889		18.752	18.676	18.596	18.210	45
6	19.227		19.118	19.057	18.993	18.923	18.850		18.688	18.599	6
7	19'333		19,510	19.124	19,090		18'941	18.860	18.773	18.681	8
8 9	19'432		19'314		10,563	0 1	19.026		18.821	18.756	9
-	19.22	19.466	19.403		19 203						-
	10	II	12	13	14	15	16	17	18	19	
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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	20	21	22	23	24	25	26	27	28	29	Dura-
tion.	19.160	19.007	18.851	18.690	18:524	18:355	18.181	18.004	17.822	17:637	tion.
0	*000	.000	*000	.000	*000	.000	.000	.000	.000	.000	0
1 2	1.875	°958	°957	°957	°957	'957 1'872	1.872	'957 1'871	1.871	1.870	1 2
3	2.753	2.752	2.751	2.750	2.749		2.747	2.746	2.744	2.743	3
4	3.293	3.292	3.290	3.289	3.284		3.284	3.282	3.280	3.577	4
5	4'397	4'395	4.393	4.391	4.389		4.383	4.380	4.377	4.374	5
6	5.164	5.164	5.161	5,128	5°155 5'887	5.121	5.148	5'143	5,139	5.135	6
8	6.608	5.900	5.896 6.598	5.892	6.284	5.883 6.281	5.878	5.872 6.568	5.867	5.861 6.223	8
9	7.281	7.276	7.269	7.263	7.256	7.248	7.240	7.232	7.223	7'214	9
10	7.925	7.918	7.911	7.903	7.894	7.885	7.876	7.865	7.855	7.844	10
1	8.241	8.232	8.234	8.214	8.204	8.493	8.482	8.470	8.457	8.444	1
$\begin{vmatrix} 2 \\ 3 \end{vmatrix}$	9'129	9.680	9,100	9.655	9.086	9.627	9,011	9.046	9.032	9.016	2
4	9.691	10.512	9.668	10.186	10.171	10.124	10.134	0.218	9'579	0,261	3 4
15	10.40	10.722	10.410	10.693	10.675	10.657	10.637	10.617	10.292	10.223	15
6	11'229	11,515	11'195	11.149	11.124	11.136	11'114	11.001	11.064	11'042	6
7	11.695	11.677	11.658	11.637	11.615	11.292	11.268	11.242	11.216	11.488	7
8 9	12'140	12'120	15,219	12.494	12.052	12.027	12'000	11.975	11'943	11,015	8
20	12.969	12'945	15,010	12.892	12.863	12.833	13.801	12'769		12'314	
1	13.354	13.358	13,300	13.540	13.539	13.506	13'171	13.132	13.097	12.695	20
2	13.721	13.693	13.662	13.630	13.296	13.261	13:523	13.484	13.443	13,399	2
3	14.071	14.040	14.007	13'972	13.936	13.898	13.857	13.814	13.770	13.723	3
4	14,403	14'370	14.334	14.297	14.528	14.512	14.143	14.158	14.080	14'030	4
25	14'719	14.683	14.646	14.606	14.564	14.20	14.473	14'424	14'373	14.319	25
6 7	15.302	14'981	14.941	14.899	12.158	14.807	14.757	14.704	14'649	14.592	6
8	15.222	15.232	15.487	15.439	15.388	15.334	15.278	15.518	15.126	12,000	8
9	15.832	15.787	15.738	15.687	15.633	15.22	15.216	15.453	15.384	15.317	9
30	16.076	16.028	15'976	15'922	15.865	15.805	15.741	15.674	15.604	15.230	30
$\frac{1}{2}$	16.307	16.471	16'201	16.323	16.084	16.050	16.121	15.882	15.807	15.729	1 2
3	16.731	16.674	16.614	16.220	16.483	16.412	16.334	16.258	15.998	16.088	3
4	16.926	16.866	16.803	16.736	16.662	16.291	16.211	16.428	16.341	16.249	4
35	17'110	17.047	16.980	16.910	16.836	16.757	16.674	16.287	16.495	16.398	35
6	17.283	17'217	17.147	17.073	16.995	16.913	16.826	16.734	16.637	16.236	6
8	17.445	17.376	17.303	17.368	17.144	17.058	16.966	16.870	16.269	16.663	7 8
9	17.741	17.666	17.586	17.501	17.412	17.317	17.217	17.115	17.002	16.886	9
40	17.875	17.797		17.625			17'329	17.219	17.104	16.983	40
1	18.001	17.918	17.831	17.739	17.642	17.239	17.431	17'317	17'197	17.071	1
3	18.114	18.031	17'941	17.845	17.743	17.637		17.405	17.281	17.120	2
4	18.326	18.139	18.042	17.942	17.837	17.726	17.686	17.486	17.357	17.285	3 4
45	18.419	18.323	18.551	18.113	18.000	17.881	17.755	17.623		17.341	45
6	18.204	18.402	18.299	18.188	18.070	17'947	17.818	17.681	17.239	17.390	6
7	18.583	18.480	18.370	18.255	18.134	18.004	17.873	17.733	17.587	17.433	7
8 9	18.655	18.248	18.435	18.316	18.191	18.060	17.966	17.778	17.628	17.471	8 9
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	20	21	22	23	24	25	26	27	28	29	
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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	30	31	32	33	34	35	36	37	38	39	Dura-
tion.	17:447	17:253	17.056	16.854	16:647	16.436	16.220	16.001	15.776	15.545	tion.
0	,000	.000	,000	.000	.000	'000	.000	,000	.000	*000	0
1	.956	956	°955 1°868	.955 1.867	.955 1.866	954 1.865	°954 1.864	'954 1'863	'953 1.862	'953 1.861	1 2
3	2.742	2'740	2.739	2.737	2.735	2.734	2.732	2.730	2.728	2.726	3
4	3.575	3.573	3.240	3.267	3.265	3.262	3.259	3.226	3.553	3.249	4
5	4.371	4.367	4.363	4°359	4°355	4.321	4'347	4.342	4.338	4.332	5
6 7	5.130	5.848	5.841	5.834	5.827	2.819	5.812 2.097	5.803	5.084	5°077 5°785	6 7
8	5.855 6.246	6.232	6.529	6.20	6.211	6.201	6.491	6.481	5°795 6°470	6.458	8
9	7.204	7.194	7.184	7.173	7.162	7.120	7.138	7.124	7.111	7.096	9
10	7.832	7.820	7.808	7.795	7.781	7.767	7.752	7.736	7.719	7.701	10
1 2	8.431	8°417 8°984	8°402 8°967	8 .3 86	8.370	8.323	8.335	8·317 8·867	8·297 8·844	8.275	1 2
3	9.001	9.524	9.204	9.483	9'461	9'439	9'415	9.389	9.362	9.333	3
4	10.029	10.034	10.012	9.991	9.966	9.940	9.913	9.884	9.853	9.819	4
15	10.220	10'525	10.200	10°473	10.442	10,412	10'384	10,321	10.319	10.279	15
6 7	11,019	10,080	10.302	10'930	10,899	11,505	10.831	10.493	10.754	10'711	6 7
8	11.459	11'429	11,811	11.774	11'735	11.694	11.621	11.602	11.226	11.203	8
9	12.279	12'242	12.503	12.163	12'120	12'074	12'027	11.975	11.051	11.863	9
20	12.657	12.617	12.575	12.230	12.483	12.433	12.381	12.324	12.262	12°201	20
1	13.012	12'971	12'925	12.877	12.825	12'771	12.413	12.625	12.888	12.217	1 2
3	13.354	13.306	13.256	13.203	13'147	13.387	13.026	13.246	13,169	13.086	3
4	13.977	13.921	13.863	13.801	13.735	13.666	13.293	13'514	13.431	13.345	4
25	14.262	14.202	14°140	14.073	14.003	13.928	13.849	13.764	13.675	13.279	25
6	14.231	14.467	14'399	14.328	14.252	14'172	14.087	13.997	13.001	13'797	6
7 8	14.784	14.715	14.643	14.789	14.485	14'400	14.309	14'212	14.100	13'999	8
9	15.544	15.166	15.084	14.997	14.902	14.807	14.704	14.294	14.478	14.353	9
30	15.452	15.369	15.585	15'190	15.092	14.989	14.879	14.763	14.639	14.207	30
1	15.646	15.228	15.466	15.369	15.265	15.122	15.040	14.916	14.786	14.647	1 2
3	15.827	15.735	15.637	15.686	15'424	15.449	15.184	15.024	14'919	14 //3	3
4	16.121	16.049	15.940	15.826	15.4	15.576	15'442	15.298	15'147	14.986	4
35	16.296	16.188	16.074	15'953	15.826	15.692	15.221	15.401	15.243	15.076	35
6	16.428	16:422	16.196	16.040	15.937	15.496	15.649	15.492	15.328	15.124	6
7 8	16.662	16.432 16.538	16.307	16.172	16.036	15.890	15.736	15.574	15.403	12,585	8
9	16.763	16.634	16.499	16.356	16.302	16.047	15.882	15.407	15.24	12.335	9
40	16.855	16.721	16.280	16.432	16.276	16.113	15.941	15.761		15.372	40
1	16.938	16.499	16.653	16.499	16.338	16.169	15.992	15.807	15.614	15.411	1
2 3	17.013	16.868	16.717	16.228	16,439	16.218		15.846	15.648	15.441	2 3
4	17.138	16.984	16.823	16.655	16.479		16.102	12.006	15.400	15.485	4
45	17.190	17.031	16.866	16.693	16.213	16.325	16.131	15.928	15.419	15.201	45
6	17.235	17'072	16.902	16.725	16.241	16:350	16.12	15.946	15.734	15.213	6
7 8	17.27.4	17.107	16.933	16.753	16.584	16.370	16,183	15.960	15.745	15.25	7 8
9	17.335	17.161	16.981	16.794	16.000	16,400	16,163	12.080	15.761	15.234	9
	30	31	32	33	34	35	36	37	38	39	
	20	21	34	33	34	33	30	3/	30	39	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	40	41	42	43	44	45	46	47	48	49	Dura-
tion.	15:310	15.070	14.824	14.572	14.316	14.054	13.786	13.514	13.236	12.953	tion.
0	,000	.000	.000	.000	.000	.000	*000	.000	.000	.000	0
1	953	'952	'952	.951	.951	.950	.950	*949	949	•948	1
2	1,860	1.859	1.828	1.856	1.855	1.823	1.852	1.820	1.848	1.846	2
3	2.724	2.451	2.419	2.716	2'713	2'710	2.707	2'703	2.699	2.695	3
4	3.246	3.242	3.238	3.533	3.28	3.23	3.218	3,215	3.202	3.498	4
5	4'327	4.321	4°315	4.308	4.302	4'294	4.285	4.276	4.267	4.256	5
6	5.070	5.062	5.053	5.044	5.034	5.024	5'012	4.999	4.986	4.971	6
7	5.775	5'765	5.754	5.741	5.728	5.714	5.699	5.682	5.664	5.644	7
8	6.445	6.432	6.417	6.402	6.382	6.367	6.347	6.326	6,303	6.278	8
9	7.080	7.064	7.046	7.026	7.006	6.983	6.959	6.935	6.904	6.873	9
10	7.683	7.662	7.641	7.617	7.592	7.564	7.535	7.503	7.468	7.430	10
1	8.253	8.229	8.203	8.175	8.145	8.115	8.076	8.038	7.997	7'952	1
2	8.793	8.764	8.734	8.700	8.665	8.627	8.282	8.240	8.492	8.439	2
3	9.303	9'269	9'234	9.196	9'155	0.110	9'062	0,010	8.954	8.893	3
4	9.784	9.746	9'706	9.662	9.615	9°564	9.208	9°449	9.384	9.312	4
15	10.530	10.102	10°149	10,000	10.046	9.988	9'925	9.858	9.784	9.706	15
6	10.666	10.618	10.266	1	10.449			10.532	10.122	10.067	6
7	11.069	11'014	10.956		10.826		10.674	10.200	10.498	10.400	7
8	11.447	11.386	11.322	11.521	11'177	11.006	11.008	10.012	10.814	10'706	8
9	11.801	11'734	11.663	11.282	11.203	11'414	11,318	11.512	11.104	10.082	9
20	12'132	12.059	11.081		11.805	11.708	11.602	11'490	11'369	11.539	20
1	12'442	12.365	12.276		12.082		11.864	11.741	11.910	11.470	1
2	12.730	12.643	12.220	12'449	12.342	12.227	12'103	11.971	11.829	11.678	2
3	12.998	12'904	12.803		12.578		12.350	12.178	12.026	11.862	3
4	13.247	13.145	13.036	12'919	12.794	12.661	12.217	12.366	12,503	12'031	4
25	13'476	13.366	13.520	13'124	12.001	12.848	12.695	12'533	12,361	12'178	25
6	13.688	13.220	13.446		13'169	13'017	12.855	12.683	12.201	12.308	6
7	13.885	13.757	13.624		13.330		12'997	12.816	12.623	12.421	7
8	14.059	13.926	13.785	13.634	13'474	13.304	13.153	12.033	12.731	12.218	8
9	14.551	14.080	13.931	13'771	13'603	13.424	13'234	13.034	12.853	12.603	9
30	14°368	14.219	14.061	13.893	13.717	13'529	13.331	13.122	12'903	12.673	30
1	14.200	14'343	14.178	14.002	13.817	13.621	13.414	13.108	12.970	12.733	1
2	14.618	14.454	14.281	1	13.904	13.700	13.486	13.262	13'027	12.482	2
3	14.724	14.552	14.372	14.180	13.080	13.768	13.547	13'315	13.074	13.855	3
4	14.817	14.639	14.451	14.222	14.042	13.826	13.208	13.360	13.115	12.822	4
35	14.000	14.714	14.219	14.314	14.100	13.875	13.640	13'396	13'143	12.881	35
6	14.972	14.779	14.578			13.012	13.674	13.425	13.162	12.001	6
7	15.034	14.835	14.628			13.948	13.405	13'449	13.189	12.016	7
. 8	15.087	14.882	14.669	14.446	14.512	13.974	13.724	13.467	13°201	12.027	8
9	15.135	14.922	14.704	14.476	14.240	13.995	13'741	13°480	13,511	12.936	9
40	15.140	14.955	14.732	14.200	14.260	14.011	13.754	13.491	13.510	12.942	40
1	15'201	14.982	14.755			14.024	13.764		13.225	12.946	1
2	15.227	15.003	14.773	14.233		14.033	13.771	13.204	13.550	12.949	2
3	15'247	15.051	14.787	14.545	14.296	14.040	13.776		13.535	12.951	3
4	15.564	15.034	14.798	14°553	14.303	14.042	13.480	13.210	13.533	12.952	4
45	15.277	15.044	14.806	14.559	14.307	14.048	13.782	13.211	13.234	12.952	45
6		15.02	14.812	14.264	14.310	14.020	13.784	13.212	13.532	12'953	6
7	15.534	15.024	14.819	14.267	14.313	14'052	13.785		13.532	12.923	7
8	15.599	12.061	14.819	14.269	14.314	14.023	13.785	13.213	13.536	12.953	8
9	12,303	15.064	14.821	14.240	14.312	14.023	13.486	13.214	13.536	12.953	9
	40	41	42	43	44	45	46	47	48	49	
	40	42	42	43	44	45	40	47	70	77	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	50	51	52	53	54	55	56	57	58	59	Dura-
tion.	12.666	12.374	12.077	11.777	11.472	11.164	10.853	10.539	10.223	9.905	tion.
0	.000	.000	.000	.000	,000	000°	*000	,000	.000	.000	0
1	'947	.946	'945	*944	*943	.942	.940	'939	'937	*936	1
2	1.843	1.841	1.838	1.832	1.831	1.858	1.824	1.819	1.812	1.800	2
3	2.690	2.685	2.680	2.673	2.667	2.660	2.652	2.643	2.634	2.624	3
4	3.490	3.482	3°472	3,462	3.451	3.440	3.427	3.412	3'397	3.380	4
5	4.245	4.535	4.518	4°203	4.184	4,169	.4'150	4.150	4,100	4.081	5
6	4.955	4'937	4.018	4.898	4.875	4.851	4.824	4.795	4.764	4.429	6
7	5.623	5.600	5.575	5.247	5.218	5.485	5.450	5°412	5.371	5.326	7
8 9	6.251	6.221	6.189	6.124	6.116	6.075	6.030	5.083	5.931	5.874	8
	6.839	6.802	6.763	6.720	6.673	6.622	6.268	6.208	6.444	6.376	9
10	7:389	7:345	7.297	7'245	7.189	7.128	7.062	6,991	6'914	6.832	10
2	7.903	7.850	7.794	7.732	7.665	7.593	7.216	7.432	7.342	7.245	1
3	8.382	8.320	8.670	8.185	8.104	8.021	7'931	7.834 8.198	7.730	7.618	2
4	-	8.756	8.679	8.597	8.507	8.411	8.308	8.26	8:202	7.953	3 4
	9.240	9.128	9.071	8.977				8.820	8:672	8.221	
15	9.621	9.529	9.431	9.325	9,511	9,090	8.960		8:673	8.212	15
7	9'972	9.870	9.760	9.642	9.216	9°542	9°237 9°483	9,316	9°138	8·748 8·950	6 7
8	10'590	10.464	10,331	10.188	10.036	9.874	9 403	9.520	9.328	9,156	8
9	10.828	10.404	10.231	10'421	10.522	10.080	9.895	9.699	9,320	9.276	9
20		10.023	10.796	10.628			10,065	9.853	9.633		20
1	11,351	11,191	10,001	10.811	10.450	10,710		9.985	9'752	9.403	1
2	11.218	11.346	11,162	10'973	10.770	10.419	10,335	10.007	9.853	6,208	2
3	11.693	11,210	11.312	11,113	10.808	10.673	10.437	10,131	9.936	9.671	3
4	11.848	11.654	11.450	11,532	11,000	10'773	10.226	10.560	10'004	9'729	4
25	11.082	11.480	11.262	11,339	11,103	10.856	10.200	10,333	10.028	9.775	25
6	12'104	11.889	11.664	11,458	11,181	10.020	10.659	10,384	10,101	9.811	6
7	12'207	11,085	11.748	11,205	11.546	10,081	10.404	10'425	10'135	9.839	7
8	12.296	12.062	11.818	11.263	11,300	11.022	10'745	10.456	10,191	9.859	8
9	12'371	12.128	11.876	11.614	11.342	11.063	10.775	10'481	10,180	9.874	9
30	12.434	12.183	11.023	11.654	11.376	11,001	10.798	10.499	10'194	9.885	30
1	12.486	12.558	11.962	11.686	11.403	11,115	10.815	10.211	10'204	9.892	1
2	12.528	12.264	11.992	11'711	11.423	11.158	10.827	10.21	10,511	9.897	2
3	12.262	12.293	12.015	11.730	11'438	11.140	10.836	10.28	10.519	0,001	3
4	12.290	12.312	12.033	11.745	11'449	11'148	10.842	10.232	10.510	9.903	4
35	12.611	12.332	12.047	11.755	11.457	11.124	10.847	10.232	10'221	9°904	35
6	12.627	12.345	12.057	11.762	11.462	11.128	10.849	10.237	10.555	9.905	6
7	12.639	12.354	12.064	11.768	11.466	11,160	10.821	10.238	10,553	9.905	7
8	12.648	12.361	12.069	11.771	11.469	11,195	10.82	10.239	10.553	9.902	8
9	12.654	12.362	12.072	11.773	11.470	11,193	10.823	10,230	10.553	9.902	9
40	12.658	12.369	12.074	11.775	11.471	11.164	10.853	10.239	10.553	9.902	40
1		12.371	12.072	11.776		11'164		10.239	10.553	9.902	1
2		12'372	12.076	11.776		11,164		10.239	10.553	9.902	2
3	12.665	12.373	12.077	11.776	11'472	11.164		10.239	10'223	9.902	3
4	12.665	12.373	12.077	11.776		11'164		10.239	10'223	59	
45	12.666	12.373	12.077	11.777		11.164		10.239	58	50	
6	12.666	12.373	12.077	11.777	11'472	11'164	10.823	57	51		
7 8	12.666	12.373	12.077	11.777	11.472	11,164		52		12.666	
9	12.666	12.373	12.077	11.777	11.472				12.374	12.666	52
ľ	1 000	- 3/3		177				12.077	12.374	12.666	1
	L.							12'077	12.373	12.666	50
	50	51	52	53	54	55	56	52	51	50	
	30	J.	J2	- 33	34	33	30	34	21	30	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	60	61	62	63	64	65	66	67	68	69	Dura-
tion.	9.586	9.266	8.946	8.625	8.306	7.987	7.670	7.356	7.044	6.736	tion.
0	.000	.000	.000	.000	.000	*000	.000	.000	.000	.000	0
1	934	'932	.929	'927	924	.021	.918	914	,911	.906	1
2	1.804	1.798	1.491	1.484	1.446	1.767	1.757	1'747	1.736	1.724	3
3	2.613	2.600	2.284	2.273	2.557	2.240	2.252	2.202	2.480	2.457	4
4	3.365	3.345	3.350	3'297	3.575	3'244	3.512	3.185	3.148	3,111	5
5	4.024	4.022	3.994	3'959	3.922	3.882	3.839	3.793	3.743	3.690	8
6 7	4.692	4.652	4.609	4.262	4.212	4.458	4.400	4°337 4°819	4.270	4.199	7
8	5.814	5.226	5.678	5.602	5.044	4°974 5°434	5'342	5°243	5.138	5.027	8
9	6.301	6.222	6.136	6.044	5.947	5.842	5.731	5.613	5.488	5.356	9
10	6.743	6.649	6.247	6.439	6.323	6.500	6.070	5.933	5.788	5.635	10
1	7'142	7.031	6.913	6.788	6.654	6.213	6.364	6.502	6.042	5.869	1
2	7.500	7.373	7.238	7.095	6.943	6.784	6.616	6.439	6.255	6.063	2
3	7.818	7.675	7.523	7.363	7'193	7'015	6.829	6.634	6.432	6.555	3
4	8.101	7'941	7.772	7.594	7.408	7.212	7.008	6.796	6.276	6.320	4
15	8.349	8.173	7.987	7.793	7.589	7'377	7.126	6.928	6.692	6.451	15
6	8.262	8.374	8.172	7.961	7.742	7.213	7'277	7.034	6.785	6.230	6
7	8.753	8.246	8.328	8.103	7.868	7.625	7.375	7.118	6.856	6.590	7
8	8.913	8.691	8.460	8.550	7.971	7.715	7.452	7.184	6,911	6.635	8
9	9.049	8.814	8.269	8.312	8.024	7.786	7.213	7.234	6.952	6.668	9
20	9,164	8.912	8.657	8.392	8.130	7.842	7.559	7.272	6.982	6.691	20
1	9.258	8.998	8.729	8.453	8.171	7.884	7.593	7.299	7.003	6.707	1
2	9.336	9.064	8.786	8.201	8.510	7.916	7.618	7.319	7.018	6.418	3
3 4	9:398	9'117	8.830	8.537	8.240	7.939	7.636	7.332	7.028	6.725	4
	9'447	9.128	8.864	8.264	8.561	7.955	7.648	7.341	7.035		25
2 5	9.486	9,190	8.889	8.584	8.276	7.967	7.657	7:347	7.039	6.733	6
7	9.212	9,513	8:907	8.608	8.287	7.975	7.662	7.351	7'041	6.735	7
8	9°537 9°553	9'230	8.930	8.615	8.599	7.983	7.668	7'353	7'043	6.735	8
9	9 5 5 5 4	9.251	8.936	8.619	8.303	7.985	7.669	7.355	7.044	6.736	9
30	9.572	9.257	8.940	8.622	8.303	7.986	7.670	7.355	7.044	6.736	30
1	9.578	9.261	8.942	8.623	8.304	7.986	7.670	7.356	7.044	6.736	1
2	9.281	9.263	8.944	8.624	8.305	7.987	7.670	7.356	7.044	6.736	2
3	9.283	9.264	8.945	8.625	8.306	7.987	7.670	7.356	7.044	6.736	3
4	9.282	9.265	8.945	8.625	8.306	7.987	7.670	7.356	7.044	69	
35	9.585	9.266	8.945	8.625	8.306	7.987	7.670	7.356	68		
6	9.286	9.266	8.945	8.625	8.306	7'987	7.670	67	4.7	40	
7	9.286	9°266	8.945	8.625	8.306	7.987	66	42	41	15.310	
8	9.286	9.266	8.946	8.625	8.306	65	10	42	15.070	15.310	62
9	9.286	9.266	8.946	8.625	64	44	43	14.824	15.070	12,310	1
40	9.286	9°266	8.946	63	45	44	14.572	14.824	12.069	12,310	60
1 2	9.586	9.266	62	46	43	14:316	14'572	14.824	-	12,310	59
4	9.286	61	47		14.054	14.316	14.572	14.824		12,310	8
	60	48		13.786	14.054	14.316	14.272	14.824		15.310	7
	49		13.214	13.786	14.024	14.316	14.572	14.824	15.069	15.310	в
		13.236	13.214	13.786	14.024	14.316	14.572	14.824	15.069	15.310	5
	12.953	13.536	13.214	13.786	14.024	14.316	14.572	14.824	15.069	15.309	54
53	12.953	13.536	13.214	13.786	14.024	14.319	14.572	14.823		15.309	3
2	12.953	13.536		13.786	14.024	14.316	14.572	14.823	15.068	15.308	2
1	12.953	13.536	13.214	13.786	14.024	14.316	14.571	14.823	15.067	15.307	1
50	12.953	13.536	13.214	13.786	14.023	14.312	14.21	14.822	15.066	15.305	50
	49	48	47	46	45	44	43	42	41	40	
	77	7	7/	-	70	77	10	-			_

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VALUES OF TEMPORARY ANNUITIES OF 1

•			ILD CIN	02 22					7		JENI.
Dura-	70	71	72	73	74	75	76	77	78	79	Dura-
tion.	6.431	6.131	5.836	5.546	5.262	4.984	4.713	4.449	4:191	3.942	tion.
0	'000	.000	.000	*000	.000	- '000	.000	.000	.000	.000	0
1	.002	.897	.892	.886	.879	.872	.865	.857	.848	.839	1
2	1.711	1.697	1.981	1.664	1.647	1.627	1.606	1.284	1'559	1.233	2
3	2.432	2'405	2'375	2.344	2,310	2.274	2.532	2.193	2.149	2,101	3
4	3'071	3.027	2,081	2.932	2.879	2.822	2.762	2.698	2.630	2.228	4
5	3.632	3.221	3.202	3°435	3,361	3'282	3,100	3,111	3.018	2,021	5
6	4.122	4.041	3.954	3.862	3.766	3.663	3.226	3'443	3'325	3.503	6
7	4.546	4'443	4.332	4.551	4.101	3.974	3.843	3.706	3.262	3.418	7
8	4.909	4.785	4.654	4.217	4'375	4°225	4.071	3,011	3.748	3.280	8
9	5'217	5.071	4.919	4.760	4.595	4.424	4'249	4.068	3.884	3.698	9
10	5.475	5,300	5.132	4'955	4.770	4.579	4.384	4.182	3.984	3.782	10
1	5.689	2,203	5,300	2,110	4.006	4.697	4.485	4.521	4.026	3.840	1
2	5.864	5.659	5.447	5'231	2,010	4.786	4.559	4.335	4'105	3.879	2
3	6.002	5.483	5°555	5,353	5.088	4.850	4.613	4.374	4.138	3.902	3
4	6.112	5.879	5.637	5,395	5'145	4.896	4.649	4.403	4,160	3,921	4
	6.504		5.698		5'185	4.928	4.673	4.421	4'173	3.930	15
15		5'953		5:442	0 0		4.689		4.185		6
6 7	6:270	6.008 6.048	5.743	5.478	5.513	4°950 4°964	4.700	4°433 4°440	4,186	3.936	7
8	6.320		5.775	5.203	5.232		4,706	4 444	4.189	3'941	8
9	6.356	6.044	5.797	5.219	5.244	4.978		4.446	4°190		9
	6.382	-	5.812	5.230	5.252		4.709			3'941	
20	6.400	6.110	5.822	5'537	5°257	4.081	4.411	4.447	4,101	3.942	20
1	6.412	6,118	5.828	5.241	5.259	4.982	4.712	4.448	4'191	3'942	1
2	6.420	6.124	5.832	5.244	5.561	4.983	4.713	4.448	4,101	3.942	2 3
3	6.425	6.124	5.834	5.242	5.262	4.984	4.713	4.448	4.101	3'942	0
4	6.428	6.150	5.835	5.246	5.262	4.984	4.713	4.448	4,191	79	
25	6.429	6.130	5.835	5.246	5.262	4.984	4.713	4.449	78	30	
6	6.430	6.131	5.836	5.246	5.262	4.984	4.413	77	31		
7	6.431	6.131	5.836	5.246	5.262	4.984	76	32		17.447	
8	6.431	6.131	5.836	5.246	5.262	75	22		17.253	17'447	72
9	6.431	6.131	5.836	5.246	74	24	33	17.056	17.253	17.447	1
30	6.431	6.131	5.836	73	25	34	16.854	17.056	17.253	17'447	70
1	6.431	6.131	72	36	35	16.647	16.854	17.056		17.447	69
2	6.431	71	27	30	16.436	16.647	16.853	17.056	17.253	17'447	8
	70	20	37	16.220	16.436	16.647	16.853	17.056	17.253	17.447	7
		38	16.001	16'220	16'436	16.647	16.823	17.056	17°253	17.447	6
	39	15.776	16.001	16.550	16.436	16.647	16.853	17.056	17.253	17.447	5
	15.545		16.000	16.550	16.436	16.647	16.853	17.056	17.253	17.447	64
00		15.776		16.550		16.647	16.853	17.055	17.253	17.447	3
63	15.245	15.776	16,000	16,550	16.436	16.647	16.853			17.446	2
2	15.245	15.776	16,000	16.550	16.436	16.647	16.853	17.055	17.253	17'445	1
60	15.245	15.776	16,000	16,550	16.436 16.436	16.646	16.853	17.022	17'251		60
	15.545	15.776									59
59	15.242	15.775	16,000	16.550	16.435	16.646	16.852	17.054	17.250	17.443	8
8	15.242	15.775	16.000	16.550	16.435	16.646	16.821	17.053	17.249		7
7 6	15.245	15.775	16,000	16.550	16.435	16.645	16.848	17.048	17.246	17'437	8
5	15.245	15.775	16,000	16.510	16:434		16.846		17.238	17.426	5
	15.244	15.775	15.999	16.510	16.432	16.641		17.044		17.418	54
54	15.244	15.774	15.998	16'217	16.430	16.639	16.842	17.039	17.231		3
3	15.243	15.773	15.996		16:427	16.635	16.836	17.033	17.223	17.408	2
2	15.242	15.771	15.004	16.515	16.423	16.622	16.820	17.013	17.212	17.395	1
50	15.28	15.769	15,086	16.201	16,410	10.015	16.809	16.999	17.185	17.359	50
	15.238	15.766	15'986						_		-
	39	38	37	36	35	34	33	32	31	30	

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VALUES OF TEMPORARY ANNUITIES OF 1

4 PER

2	80	81	82	83	84	85	86	87	88	89	CENT.
Dura- tion.	3.701	3.467	3.242	3.025	2.817	2.618	2.427	2.245	2.073	1.909	Dura- tion.
0	.000	.000	,000	.000	000	.000	,000	.000	*000	*000	0
1	.828	.817	*805	793	'779	.764		'731	*713	'693	1
2	1.202	1.476	1.444	1'410	1'373	1.332	1'295	1.252	1.207	1,160	2
3	2.021	1'997	1,041	1.881	1.818	1.752	1.684	1.613	1,239	1.463	3
4	2.483	2.403	2.320	2.234	2°143	2.020	1.954	1.855	1.755	1.654	4
5	2.820	2.714	2.604	2.491	2.375	2.256	2.136	2.014	1.891	1.760	5
6	3.077	2'946	2.812	2.675	2.236	2,392	2.254	2'113	1.973	1.835	. 6
7	3.560	3,112	2.060	2.802	2.644	2.485	2,358	2'173	2'021	1.872	7
8	3,400	3.536	3.065	2.888	2.414	2.242	2.373	2.502	2'047	1.891	8
9	3.209	3,350	3,131	2'944	2.758	2.24	2'399	2.556	2.000	1,001	9
10		3.376	3.146	2'979	2.785	2.296	2'413	2.236	2.067	1'905	
10	3.579		3.504	3,000	2.800	2.607	2,421	2'241	2'070		10
2	3.656	3,413		3.013	2.800	2.613	2.421			1.907	1
3	3.675		3.551	3.019	2.813	2.612	2.426	2.244	2.072	1,008	2 3
4		3.450	3.531		2.812	2.617	1		2.072	1,000	0
	3.687	3.458	3°237	3.055			2.427	2°245	2.073	89	
15	3.693	3°463	3.239	3.024	2.816	2.617	2.427	2.242	88	20	
6	3.697	3°465	3.541	3.022	2.817	2.618	2.427	87	21	20	
7	3.699	3.466	3°242	3.022	2.817	2.618	86	22		19.160	
8	3.400	3.467	3.242	3.022	2.817	85	22		19.007	19.190	82
9	3.400	3'467	3.242	3.052	84	24	23	18.851	19'007	10,160	1
20	3'700	3.467	3.545	83	25	24	18.690	18.851	19.007	10,160	80
1	3.401	3.467	82	26	25	18.524	18.690	18.821			
2	3.401	81	27	20	18.355		18.600	10.051	19.007	19,160	79
	80	-0	27	18.181		18.524		18.851	19.007	19,160	8
		28	18.004	18.181	18.355	18.24	18.690	18.851	19.007	19,160	7
	29	17.822	18.004		18.355	18.524	18.690	18.851	19.007	19.160	6
	17:637			18.181	18.355	18.234	18.690	18.851	19.007	19,160	5
		17.822	18.004	18.181	18.355	18.234	18.690	18.850	19.007	19,190	74
73	17.637	17.822	18.004	18.181	18.355	18.24	18.690	18.850	19.002	19,160	3
2	17.637	17.822	18.004	18.181	18.355	18.524	18.689	18.850	19.002	19,190	2
1	17.637	17.822	18.004	18.181	18.355	18.524	18.689	18.850	19.007	19.129	1
70	17.637	17.822	18.004	18.181	18.355	18.234	18.689	18.820	19.006	19.129	70
69	17.637	17.822	18.003	18.181	18.324	18.234	18.689	18.849	10.009	19.128	69
8	17.636	17.822	18.003	18.181	18.354	18.23	18.688	18.848	19.002	19,129	8
7	17.636	17.822	18.003	18.181	18.354	18.23	18.687	18.847	19.003	19°154	7
6	17.636	17.822	18.003	18.180	18.323	18.22	18.686	18.846	10,001	19,121	6
5	17.636	17.821	18.005	18,180	18.325	18.221	18.684	18.843	18.998	19'147	5
64	17.636	17.821	18.005	18.179	18.321	18.219	18.685	18.840	18.994	19°142	84
3	17.635	17.820	18.001	18.177	18.349	18.219	18.679	18.836	18.088	19.132	3
2	17.635	17.819	17.998	18.172	18.346	18.213	18.674	18.830	18.981	19'127	2
1	17.634	17.818	17.996	18'172	18.343	18.208	18.668	18.823	18.973	19'117	1
60	17.632	17.816	17.993	18.169	18.338	18.205	18.661	18.814	18.962	19°104	60
59	17.630	17.813	17.990	18.164			18.651	18.803	18.948	19.089	59
8	17.627	17.808	17.985	18.157	18.323	18.484	18.639	18.789	18.933	19.070	8
7	17.622	17.803	17'978		18.313	18.472	18.625	18.772	18.913	19.049	7
6	17.616	17'796	17.969	18'137	18.300		18.608	18.752	18.891	19'024	6
5	17.609	17.786	17.958	18'124	18.284	18.438	18.284	18.729	18.865	18.995	5
54	17.599	17.774	17.944	18.107	18.265	18.417	18.262	18.701	18.834	18.961	54
3	17.587	17.760	17.926	18.088	18.243	18.391	18.534	18.670	18.800	18'923	3
2	17.571	17.742	17.906	18.064		18.361	18.201	18.633	18.760	18.881	2
1	17.552	17.720	17.881	18.036	18.182	18'327	18.463	18.592	18.716	18.833	1
50	17.230	17.694	17.852	18.003	18.149	18.287	18.420	18.545	18.665	18.779	50
	-/ 7.30		1/072	10000							
	29	28	27	26	25	24	23	22	21	20	

OM

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	90	91	92	93	94	95	96	97	98	99	Dura-
tion.	1.752	1.606	1.466	1.338	1.212	1.102	.991	-902	*814	.693	tion.
0	.000	.000	.000	.000	.000	,000	,000	.000	.000	.000	0
1	.672	.651	627	.605	577	*553	.21	497	°481	°449	1
2	1,110	1.000	1,006	953	.896	.841	.780	.736	.696	.634	2
3	1.382	1.307	1'225	1'146	1'062	'985	*905	.844	.785	.693	3
4	1.221	1'449	1.346	1.247	1.142	1.024	.961	.888	.814	99	
5	1.647	1.228	1	1.592	1.182	1.082	.984	.902	98		
			1,400		-		.991	97		10	
6	1.400	1.269	1°440	1,351	1,503	1.097			II		
7	1.727	1.289	1'455	1,335	1.510	1,105	96	12		20.450	
8	1.41	1,299	1'462	1,330	1,515	95	TO		20.340	20.450	92
9	1.748	1.004	1.462	1,338	94	TA	13	20.226	20.340	20.420	1
10	1.421	1.606	1'466	93	7.5	14	20.108	20.336	20'340	20.420	90
1	1.752	1.606	92		15	19.986			_		
2	1.752	91		. 16	19.859		20,108	20.226	20.340	20'450	89
	90		17	19.728		19.986	20.108	20,550	20.340	20'450	8
		18	19.593		19.859	19,086	50,108	20,556	20.340	20.450	7
	19		19 999	19.728	19.859	19'986	20,108	20°226	20.340	20'450	6
		19.453	19'593	19'728	19.829	19.986	20,108	20,559	20'340	20'450	5
	19.309	19'453	19.293	19'728	19.859	19'986	20.108	20.226	20'340	20'450	84
83	19.309	19'453	19.293	19.728	19.859	19.986	20'108	20°226	20.340	20'450	3
2	19.309	19.453	19.593	19.728	19.859	19.986	20'108	20'226	20.340	20.450	2
1	19,309	19.453	19.293	19.728	19.859	19.986	20.108	20.556	20.340	20.449	1
80	19,309		19.293	19.728	19.859	19.986	20.108	20'226	20.339	20.449	80
1		19.453					20.108	20.556		20'448	79
79	19,300	19.453	19.293	19.728	19.859	19'986			20.339		8
8	19.309	19'453	19.293	19.728	19.859	19.985	20.107	20.222	20.338	20.447	
7	19,309	19'453	19.293	19.728		19.985	20'107	20'224	20.337	20.446	7
6	19.309	19°453	19.293	19.727	19.828	19.984	20,100		20,332	20'444	6
5	19.309	19.453	19.592	19.727	19.857	19.984	20,102	20,555	50,333	20.441	5
74	19.309	19'453	19'592	19.726	19.857	19.982	20,103	20,550	20,331	20'438	74
3	19.308	19'452	19.591	19'726	19.855	19.981	20'101	20'217	20'327	20'434	3
2	19.308	19.451	19.590	19.724	19.854	19'979	20.098	20,513	20,353	20'428	2
1	19:307	19.451	19.289	19.722	19.851	19'975	20.094	20.508	20'317	20'421	1
70	19'306	19.449	19.587	19.720	19.848	19'972	20'090	20'202	20'310	20'413	70
69	19.305	19'447	19.584	19,414	19.844	19'966	20.083	20'195	20.301	20'403	69
	19,303	19'444	19.281	19'712	19.839	19,960	20.076		20.501	20.391	8
8		-			19.832	10,025	20.066		20'279	20'377	7
7	19.300	19'441	19.576	19.707	19.823	19,942	20.022	50.195	20.564	20.361	6
6	19.296	19.436	19.571	19.700				1	20'247	1	5
5	19,591	19,430	19.263	19.691	19.813	19'930	20'042	20'147		20°342	
64	19'285	19'422	19'554	19.680	19.801	19,019	20.026	20'129	20.227	20'320	64
3	19'277	19'413	19.243	19.667	19.786				20.502	1 70	3
2	19'267	19,401	19.230	19.652	19.769		19.985		20'179		2
1	19.255	19'387	19.214	19.634	19'749	19.828	19,961		20.120	20.534	1
60	19.540	19.370	19°495	19.613	19.725	19.832	19.933	20.058	20'117	20,505	60
59	19'223	19'351	19'473	19.588	19.698	19.803	19.901	19'994	20.081	20,163	59
8	19'202	19.328		19.560	19.668		19.866	19.956	20'041	20'120	8
7	19.178	19.301		19.528	19.633		1		19.996	20'074	7
8	19.120	19.270		19.492	19.292		19.782			20'022	6
5	10,118	19.536		19.452	19.22	19.646	19'734	1 0	19.894		5
	10,085	19.197		19'407	19'504		19.681		19.836		54
54		1		1					19.773	1 0	3
3	19'041	19.123	1	19.357	19'451				1		2
2	18.995	19'104			19,393		19.559		19.631	19.694	1
1	18.944	19'049			19,330		19'490				50
50	18.887	18.989	19.082	19.176	19.261	19'341	19.416	19.486	19.221	19'613	30
	19	18	17	16	15	14	13	12	II	10	
		1						-	'		

$O^{M(5)}$

AGGREGATE DATA,

EXCLUDING THE FIRST FIVE YEARS' EXPERIENCE.

GRADUATED MORTALITY TABLE.

$$\begin{split} \log l_x &= \log k + x \, \log s + c^x \! \log g \\ \mu_x &= -\frac{d}{dx} \! \log_e l_x \! = -\log_e s - (\log_e g. \, \log_e c) c^x \! = \! \text{A} + \text{B} c^x \\ & \underset{\text{(to base 10)}}{\text{col}} p_x \! = -\Delta \! \log_{10} l_x \! = -\log_{10} s - \log_{10} g \, \left(c - 1\right) c^x \! = \! \text{A}' + \text{B}' c^x \end{split}$$

CONSTANTS.

Constant.	Value.	Common Logarithm.	Napierian Logarithm.
k	114 157.6	5°057 504 7	11.642 334 9
S	994 128 7	ī°997 442 5	1.994 111 1
g	.998 844 9	ī·999 498 o	ī·998 844 2
C	1.093 926 4	0.039 000 0	0.080 800 8
A	·005 888 9	3.770 031 3	6.865 307 3
В	.000 103 8	4.016 140 9	10.826 894 5
A'	002 557 5	3.407 815 6	6.031 274 8
В'	*000 047 2	5.673 601 4	10.038 099 1

Modulus of Common Logarithms= $\cdot 434\ 294\ 482 = \frac{1}{2 \cdot 302\ 585\ 09}$

Base of Napierian Logarithms (e)=2.718281828

 $O^{M(5)}$

ELEMENTARY VALUES

 $O^{M(5)}$

l_x	d_x	p_x	q_x	μ_x	e_x	x
107 324	658	.993 87	'006 13	'006 14	48.994	10
106 666	658	.993 83	'006 17	'006 17	48.295	11
106 008	656	.993 81	'006 19	'006 19	47.595	12
105 352	655	.993 78	'006 22	'006 22	46.892	13
104 697	654	.993 75	'006 25	'006 25	46.186	14
104 043	654	'993 71	.006 29	.006 29	45°476	15
103 389	654	'993 67	.006 33	.006 33	44°763	16
102 735	655	'993 62	.006 38	.006 37	44°048	17
102 080	655	'993 58	.006 42	.006 41	43°331	18
101 425	655	'993 54	.006 46	.006 46	42°610	19
100 770	657	.993 48	006 52	006 51	41.888	20
100 113	660	.993 41	006 59	006 57	41.162	21
99 453	661	.993 35	006 65	006 64	40.435	22
98 792	664	.993 28	006 72	006 71	39.706	23
98 128	667	.993 20	006 80	006 78	38.975	24
97 461	672	.993 11	.006 89	.006 87	38·242	25
96 789	676	.993 02	.006 98	.006 96	37·507	26
96 113	681	.992 91	.007 09	.007 06	36·771	27
95 432	688	.992 79	.007 21	.007 17	36·034	28
94 744	694	.992 68	.007 32	.007 29	35·296	29
94 050 93 347 92 636 91 916 91 184	703 711 720 732 744	'992 53 '992 38 '992 23 '992 04 '991 84	°007 47 °007 62 °007 77 °007 96 °008 16	.007 57 .007 73 .007 90 .008 09	34°555 33°816 33°075 32°334 31°594	30 31 32 33 34
90 440 89 683 88 912 88 124 87 318	757 771 788 806 825	*991 63 *991 40 *991 14 *990 85 *990 55	008 60 008 86 009 15 009 45	.008 52 .008 77 .009 04 .009 33	30.854 30.114 29.375 28.638 27.903	35 36 37 38 39
86 493	846	°990 22	009 78	'009 66 '010 01 '010 40 '010 82 '011 29	27.169	40
85 647	869	°989 85	010 15		26.437	41
84 778	895	°989 44	010 56		25.708	42
83 883	922	°989 01	010 99		24.983	43
82 961	951	°988 54	011 46		24.260	44
82 010	984	988 00	'012 00	'011 79 '012 35 '012 95 '013 62 '014 34	23.541	45
81 026	1018	987 44	'012 56		22.827	46
80 008	1056	986 80	'013 20		22.118	47
78 952	1096	986 12	'013 88		21.414	48
77 856	1139	985 37	'014 63		20.715	49
76 717	1 185	'984 55	.015 45	°015 14	20°022	50
75 532	1 234	'983 66	.016 34	°016 01	19°337	51
74 298	1 286	'982 69	.017 31	°016 96	18°657	52
73 012	1 343	'981 61	.018 39	°018 00	17°986	53
71 669	1 402	'980 44	.019 56	°019 14	17°323	54
	107 324 106 666 106 008 105 352 104 697 104 043 103 389 102 735 102 080 101 425 100 770 100 113 99 453 98 792 98 128 97 461 96 789 96 113 95 432 94 744 94 050 93 347 92 636 91 918 90 440 89 683 88 912 88 124 87 318 86 493 85 647 84 778 83 883 82 961 82 010 81 026 80 008 78 952 77 856 76 717 75 532 74 298 73 012	107 324 658 106 666 658 106 008 656 105 352 655 104 697 654 104 043 654 103 389 654 102 735 655 102 080 655 101 425 655 100 770 657 100 113 660 99 453 661 98 792 664 98 128 667 97 461 672 96 789 676 96 113 681 95 432 688 94 744 694 94 050 703 93 347 711 92 636 720 91 916 732 91 184 744 90 440 757 89 683 771 89 683 895 90 90 90 90 90 90 90 90 90 90 90 90 90 9	107 324 658 993 87 106 666 658 993 83 106 008 656 993 81 105 352 655 993 78 104 697 654 993 75 104 043 654 993 75 104 043 655 993 62 102 080 655 993 58 101 425 655 993 58 101 425 655 993 58 101 425 655 993 48 100 770 657 993 48 100 113 660 993 41 99 453 661 993 28 98 128 667 993 20 97 461 672 993 11 96 789 664 993 20 97 461 672 993 11 96 789 666 993 20 97 461 672 993 11 96 789 668 992 79 94 744 694 992 68 94 050 703 992 63 93 347 711 992 38 92 636 720 992 68 94 050 703 992 68 94 050 703 992 68 94 050 703 992 68 94 050 703 992 68 94 050 703 992 68 94 050 703 992 68 94 050 703 992 68 94 050 703 992 68 94 050 703 992 68 94 050 992 85 95 93 347 711 992 38 96 83 771 991 40 97 840 757 991 63 89 683 771 991 40 88 912 788 991 14 80 683 771 991 40 88 912 788 991 14 80 683 771 991 40 88 912 788 991 14 80 683 771 991 84 90 440 757 991 63 89 683 771 991 40 88 912 788 991 14 80 683 990 85 87 318 825 990 55 86 493 846 990 22 86 493 846 990 22 87 30 88 60 988 50 88 922 989 01 88 1026 1018 984 988 00 81 026 1018 984 988 00 81 026 1018 984 988 00 81 026 1018 984 988 00 81 026 1018 984 988 00 81 026 1018 987 44 80 008 78 952 1096 986 12 77 856 1139 985 37 76 717 1185 984 55 75 532 1234 983 66 78 952 1096 986 12 77 856 1139 985 37 76 717 1185 984 55 75 532 1234 983 66 78 952 1096 986 12 77 856 1139 985 37	107 324	107 324	107 324

 $O^{M(5)}$

ELEMENTARY VALUES

0M(5)

x	l_x	d_x	p_x	q_x	μ_x	e_x	x
55 56 57 58 59	70 267 68 803 67 274 65 676 64 007	1 464 1 529 1 598 1 669 1 742	'979 17 '977 78 '976 25 '974 59 '972 78	'020 83 '022 22 '023 75 '025 41 '027 22	'020 38 '021 74 '023 23 '024 86 '026 65	16.669 16.024 15.388 14.762	55 56 57 58 59
60	62 265	1 819	'970 79	'029 21	.028 60	13.543	60
61	60 446	1 897	'968 62	'031 38	.030 73	12.950	61
62	58 549	1 975	'966 27	'033 73	.033 06	12.370	62
63	56 574	2 055	'963 68	'036 32	.035 62	11.802	63
64	54 519	2 133	'960 88	'039 12	.038 41	11.247	64
65	52 386	2 211	'957 79	°042 21	°041 47	10'704	65
66	50 175	2 285	'954 46	°045 54	°044 81	10'176	66
67	47 890	2 355	'950 82	°049 18	°048 47	9'662	67
68	45 535	2 421	'946 83	°053 17	°052 47	9'161	68
69	43 114	2 478	'942 52	°057 48	°056 84	8'676	69
70	40 636	2 527	937 81	°062 19	°061 63	8·205	70
71	38 109	2 565	932 69	°067 31	°066 87	7·749	71
72	35 544	2 591	927 10	°072 90	°072 60	7·308	72
73	32 953	2 602	921 04	°078 96	°078 86	6·883	73
74	30 351	2 596	914 47	°085 53	°085 72	6·473	74
75	27 755	2 572	'907 33	°092 67	'093 22	6.079	75
76	25 183	2 529	'899 57	°100 43	'101 43	5.699	76
77	22 654	2 466	'891 15	°108 85	'110 40	5.336	77
78	20 188	2 381	'882 06	°117 94	'120 22	4.987	78
79	17 807	2 276	'872 19	°127 81	'130 96	4.654	79
80	15 531	2 151	·861 50	'138 50	142 72	4°336	80
81	13 380	2 007	·850 00	'150 00	155 57	4°033	81
82	11 373	1 847	·837 60	'162 40	169 63	3°745	82
83	9 526	1 674	·824 27	'175 73	185 02	3°471	83
84	7 852	1 493	·809 86	'190 14	201 85	3°211	84
85	6 359	1 308	'794 31	'205 69	'220 26	2°965	85
86	5 051	1 122	'777 87	'222 13	'240 40	2°733	86
87	3 929	943	'759 99	'240 01	'262 44	2°514	87
88	2 986	773	'741 13	'258 87	'286 54	2°308	88
89	2 213	617	'721 19	'278 81	'312 91	2°114	89
90	1 596	480	699 25	300 75	'341 76	1°931	90
91	1 116	360	677 42	322 58	'373 32	1°762	91
92	756	263	652 12	347 88	'407 84	1°601	92
93	493	183	628 80	371 20	'445 60	1°454	93
94	310	124	600 00	400 00	'486 92	1°313	94
95	186	79	575 27	424 73	532 11	1°188	95
96	107	49	542 06	457 94	581 56	1°065	96
97	58	28	517 24	482 76	635 64	°966	97
98	30	15	500 00	500 00	694 81	•867	98
99	15	8	466 67	533 33	759 54	°733	99
100	7	4	*428 57	571 43	·830 35	°571	100
101	3	2	*333 33	·666 67	·907 82	°333	101
102	1	1	*000 00	1°000 00	·992 56	°000	102

OM(5)

ELEMENTARY VALUES

 $0^{M(5)}$

x	$\log l_x$	$\log d_x$	$\log p_x$	$\log \mu_x$	$\operatorname{col}\ l_x$	$col p_x$	x
10 11 12 13 14	5'030 70 '028 03 '025 34 '022 64 '019 93	2.818 23 .818 23 .816 90 .816 24 .815 58	7.997 33 .997 31 .997 30 .997 29 .997 28	3.788 43 .790 12 .791 96 .793 96 .796 14	6·969 30 ·971 97 ·974 66 ·977 36 ·980 07	0.002 67 .002 69 .002 70 .002 71	10 11 12 13 14
15	°017 21	*815 58	'997 26	*798 52	'982 79	'002 74	15
16	°014 47	*815 58	'997 25	*801 10	'985 53	'002 75	16
17	°011 72	*816 24	'997 22	*803 91	'988 28	'002 78	17
18	°008 94	*816 24	'997 21	*806 96	'991 06	'002 79	18
19	°006 15	*816 24	'997 18	*810 27	'993 85	'002 82	19
20	*003 33	'817 57	'997 16	*813 87	'996 67	.002 84	20
21	*000 49	'819 54	'997 13	*817 77	'999 51	.002 87	21
22	4*997 62	'820 20	'997 10	*822 00	5'002 38	.002 90	22
23	*994 72	'822 17	'997 07	*826 57	'005 28	.002 93	23
24	*991 79	'824 13	'997 04	*831 52	'008 21	.002 96	24
25	988 83	827 37	°997 oo	*836 88	'011 17	'003 00	25
26	985 83	829 95	°996 95	*842 66	'014 17	'003 05	26
27	982 78	833 15	°996 91	*848 90	'017 22	'003 09	27
28	979 69	837 59	°996 86	*855 62	'020 31	'003 14	28
29	976 55	841 36	°996 81	*862 86	'023 45	'003 19	29
30	'973 36	*846 96	°996 74	*870 64	°026 64	'003 26	30
31	'970 10	*851 87	°996 68	*879 00	°029 90	'003 32	31
32	'966 78	*857 33	°996 61	*887 97	°033 22	'003 39	32
33	'963 39	*864 51	°996 53	*897 56	°036 61	'003 47	33
34	'959 92	*871 57	°996 44	*907 82	°040 08	'003 56	34
35	'956 36	*879 10	'996 35	918 77	.043 64	'003 65	35
36	'952 71	*887 05	'996 25	930 45	.047 29	'003 75	36
37	'948 96	*896 53	'996 13	942 87	.051 04	'003 87	37
38	'945 09	*906 34	'996 01	956 07	.054 91	'003 99	38
39	'941 10	- *916 45	'995 88	970 06	.058 90	'004 12	39
40	936 98	'927 37	'995 73	984 86	'063 02	'004 27	40
41	932 71	'939 02	'995 57	2.000 52	'067 29	'004 43	41
42	928 28	'951 82	'995 39	016 99	'071 72	'004 61	42
43	923 67	'964 73	'995 20	034 35	'076 33	'004 80	43
44	918 87	'978 18	'995 00	052 54	'081 13	'005 00	44
45	'913 87	'993 00	'994 75	'071 62	'086 13	'005 25	45
46	'908 62	3'007 75	'994 51	'091 60	'091 38	'005 49	46
47	'903 13	'023 66	'994 23	'112 44	'096 87	'005 77	47
48	'897 36	'039 81	'993 93	'134 15	'102 64	'006 07	48
49	'891 29	'056 52	'993 60	'156 70	'108 71	'006 40	49
50	.884 89	°073 72	'993 24	'180 13	'115 11	006 76	50
51	.878 13	°091 32	'992 85	'204 36	'121 87	007 15	51
52	.870 98	°109 24	'992 41	'229 43	'129 02	007 59	52
53	.863 39	°128 08	'991 94	'255 27	'136 61	008 06	53
54	.855 33	°146 75	'991 42	'281 90	'144 67	008 58	54
L							

OM(5)

ELEMENTARY VALUES

 $O^{M(5)}$

x	$\log l_x$	$\log d_x$	$\log p_x$	$\log \mu_x$	$\operatorname{col}\ l_x$	col_{p_x}	x
55 56 57 58 59	4.846 75 .837 61 .827 85 .817 41 .806 23	3.165 54 .184 41 .203 58 .222 46 .241 05	7.990 86 .990 24 .989 56 .988 82 .988 01	2·309 25 337 34 366 12 395 57 425 63	5·153 25 ·162 39 ·172 15 ·182 59 ·193 77	0.009 14 .009 76 .010 44 .011 18	55 56 57 58 59
60 61 62 63 64	794 24 781 37 767 52 752 62 736 55	259 83 278 07 295 57 312 81 328 99	°987 13. °986 15 °985 10 °983 93 °982 67	*456 32 *487 56 *519 36 *551 66 *584 46	*205 76 *218 63 *232 48 *247 38 *263 45	°012 87 °013 85 °014 90 °016 07 °017 33	60 61 62 63 64
65 66 67 68 69	719 22 700 49 680 24 658 35 634 62	'344 59 '358 89 '371 99 '383 99 '394 10	°981 27 °979 75 °978 11 °976 27 °974 29	.617 69 .651 37 .685 44 .719 88 .754 67	280 78 299 51 319 76 341 65 365 38	°018 73 °020 25 °021 89 °023 73 °025 71	65 66 67 68 69
70 71 72 73 74	608 91 581 03 550 77 517 90 482 17	°402 61 °409 09 °413 47 °415 31 °414 30	°972 12 °969 74 °967 13 °964 27 °961 17	'789 79 '825 21 '860 91 '896 87 '933 08	391 09 3418 97 3449 23 3482 10 517 83	°027 88 °030 26 °032 87 °035 73 °038 83	70 71 72 73 74
75 76 77 78 79	443 34 401 11 355 14 305 09 250 59	'410 27 '402 95 '391 99 '376 76 '357 17	957,77 954,93 949,95 945,50	°969 51 T°006 17 °042 97 °079 98 °117 14	*556 66 *598 89 *644 86 *694 91 *749 41	'042 23 '945 97 '050 05 '054 50 '059 39	75 76 77 78 79
80 81 82 83 84	*191 20 *126 46 *055 88 3*978 91 *894 98	332 64 302 55 266 47 223 76 174 06	935 26 929 42 923 03 916 07 908 41	154 48 191 93 229 50 267 22 305 03	*808 80 *873 54 *944 12 4*021 09 *105 02	064 74 070 58 076 97 083 93	80 81 82 83 84
85 86 87 88 89	*803 39 *703 38 *594 28 *475 09 *344 98	°116 61 °049 99 2°974 51 °888 18 °790 29	*899 99 *890 90 *880 81 *869 89 *858 05	342 94 380 93 419 03 457 19	196 61 296 62 405 72 524 91 655 02	100 01 109 10 119 19 130 11	85 86 87 88 89
90 91 92 93 94	203 03 047 66 2878 52 692 85	'681 24 '556 30 '419 96 '262 45 '093 42	*844 63 *830 86 *814 33 *798 51 *778 15	533 72 572 08 610 49 648 95 687 46	796 97 952 34 3:121 48 307 15 508 64	155 37 169 14 185 67 201 49	90 91 92 93 94
95 96 97 98 99	269 51 029 38 1763 43 477 12 176 09	1.897 63 .690 20 .447 16 .176 09	759 87 734 05 713 69 698 97 669 01	726 00 764 59 803 21 841 87 880 55	73° 49 97° 62 2.236 57 522 88 823 91	*240 13 *265 95 *286 31 *301 03 *330 99	95 96 97 98 99
100 101 102	0°845 10 °477 12 °000 00	°602 06 °301 03 °000 00	°632 02 °522 88	°919 26 °958 00 °9 9 6 76	1°154 90 °522 88 0°000 00	367 98 377 12	100 101 102



$\mathbf{O}^{\mathbf{M}(5)}$

2 PER CENT.

CONSTANTS.

Constant.	Number.	Logarithm.
i $(1+i)$ $(1+i)^{\frac{1}{2}}$ $(1+i)^{\frac{1}{4}}$	°02 1°02 1°009 950 5 1°004 962 9	2·301 030 0 0·008 600 2 0·004 300 1 0·002 150 0
υ υ ¹ ν ¹ α δ	'980 392 2 '990 147 5 '995 061 6 '019 607 8 '019 802 6	1.991 399 8 1.995 699 9 1.997 850 0 2.292 429 8 2.296 722 8

 $O^{M(5)}$

COMMUTATION TABLE

PER CENT

x	\mathbf{D}_x	\mathbb{N}_x	\mathbb{S}_x	C_x	M_x	R_x	x
10	88 043	2 665 453	61 738 381	529.21	35 779'23	1 454 898·27	10
11	85 787	2 577 410	59 072 928	518.83	35 250'02	1 419 110·04	11
12	83 587	2 491 623	56 495 518	507.11	34 731'19	1 383 869·02	12
13	81 441	2 408 036	54 003 895	496.41	34 224'08	1 349 137·83	13
14	79 347	2 326 595	51 595 859	485.93	33 727'67	1 314 913·75	14
15	77 305	2 247 248	49 269 264	476.40	33 241'74	1 281 186·08	15
16	75 313	2 169 943	47 022 016	467.06	32 765'34	1 247 944·34	16
17 18 19	73 369 71 472 69 621	2 094 630 2 021 261 1 949 789	44 852 073 42 757 443 40 736 182	458.60 449.61 440.80	31 390.04 31 330.04	1 215 179°00 1 182 880°72 1 151 041°04	17 18 19
20	67 815	1 880 168	38 786 393	433'47	30 949°27	1 119 650'97	20
21	66 052	1 812 353	36 906 225	426'91	30 515°80	1 088 701'70	21
22	64 330	1 746 301	35 093 872	419'18	30 088°89	1 058 185'90	22
23	62 650	1 681 971	33 347 571	412'82	29 669°71	1 028 097'01	23
24	61 008	1 619 321	31 665 600	406'56	29 256°89	998 427'30	24
25	59 4°5	1 558 313	30 046 279	401.57	28 850·33	969 170'41	25
26	57 839	1 498 908	28 487 966	396.04	28 448·76	940 320'08	26
27	56 3°9	1 441 069	26 989 058	391.15	28 052·72	911 871'32	27
28	54 814	1 384 760	25 547 989	387.42	27 661·57	883 818'60	28
29	53 352	1 329 946	24 163 229	383.14	27 274·15	856 157'03	29
30	51 922	1 276 594	22 833 283	380·50	26 891°01	828 882 88	30
31	50 524	1 224 672	21 556 689	377·28	26 510°51	801 991 87	31
32	49 156	1 174 148	20 332 017	374·56	26 133°23	775 481 36	32
33	47 817	1 124 992	19 157 869	373·34	25 758°67	749 348 13	33
34	46 506	1 077 175	18 032 877	372·02	25 385°33	723 589 46	34
35	45 222	1 030 669	16 955 702	371°10	25 013'31	698 204'13	35
36	43 965	985 447	15 925 033	370°55	24 642'21	673 190'82	36
37	42 732	941 482	14 939 586	371°30	24 271'66	648 548'61	37
38	41 523	898 750	13 998 104	372°33	23 900'36	624 276'95	38
39	40 336	857 227	13 099 354	373°63	23 528'03	600 376'59	39
40	39 172	816 891	12 242 127	375.63	23 154'40	576 848.56	40
41	38 028	777 719	11 425 236	378.28	22 778'77	553 694.16	41
42	36 904	739 691	10 647 517	381.96	22 400'49	. 530 915.39	42
43	35 799	702 787	9 907 826	385.77	22 018'53	508 514.90	43
44	34 711	666 988	9 205 039	390.10	21 632'76	486 496.37	44
45	33 640	632 277	8 538 051	395.72	21 242.66	464 863.61	45
46	32 585	598 637	7 905 774	401.37	20 846.94	443 620.95	46
47	31 545	566 052	7 307 137	408.18	20 445.57	422 774.01	47
48	30 518	534 507	6 741 085	415.34	20 037.39	402 328.44	48
49	29 504	503 989	6 206 578	423.17	19 622.05	382 291.05	49
50	28 503	474 485	5 702 589	431.63	19 198.88	362 669.00	50
51.	27 512	445 982	5 228 104	440.66	18 767.25	343 470.12	51
52	26 532	418 470	4 782 122	450.23	18 326.59	324 702.87	52
53	25 561	391 938	4 363 652	460.96	17 876.36	306 376.28	53
54	24 599	366 377	3 971 714	471.78	17 415.40	288 499.92	54
					1		

 $O^{M(5)}$

COMMUTATION TABLE

2 PER CENT.

x	D_x	\mathbb{N}_x	S_x	C_x	M_x	R_x	α
_	23 645. 22 699. 22 826.	318 133° 295 434° 273 675°	2 649 992° 2 945 426° 3 263 559°	494°54 506°72	16 460.64 15 966.10 15 459.38	271 084.52 254 140.90 237 680.26 221 714.16 206 254.78	55 56 57 58 59
60 61 62 63 64	18 977. 18 062. 17 152. 16 248.	232 951° 195 912° 178 760° 162 512°	1 890 517; 1 676 543; 1 480 631;	555.72 567.22	13 866.06 13 310.34	191 314'25 176 904'67 163 038'61 149 728'27 136 985'15	60 61 62 63 64
65 66 67 68 69	14 461. 13 579. 12 707. 11 845.	147 161° 132 700° 119 121° 106 414° 94 569°	859 498· 740 377	598·38 606·28 612·60 517·42 619·57	9 758.41	124 820°66 113°244°99 102 267°70 91 896°69 82 138°28	65 66 67 68 69
70 71 72 73 74	10 160° 9 341°5 9 7 763°9 7 763°9	83 574° 73 413°6 64 072°1 55 530°2 47 766°3	455 820°4 382 406°8	619.43 616.42 610.46 601.03 587.88	8 521'42 7 901'99 7 285'57 6 675'11 6 074'08	72 997 29 64 475 87 56 573 88 49 288 31 42 613 20	70 71 72 73 74
75 76 77 78 79	6 285.3 5 591.1 4 931.0 4 308.0 3 725.4	40 755.6 34 470.3 28 879.2 23 948.2 19 640.2	215 038 2 174 282 6 139 812 3 110 933 1 86 984 9	571.03 550.47 526.23 498.13 466.83	5 486 20 4 915 17 4 364 70 3 838 47 3 340 34	36 539'12 31 052'92 26 137'75 21 773'05 17 934'58	75 76 77 78 79
80 81 82 83 84	3 185.6 2 690.6 2 242.1 1 841.2 1 487.9	15 914.8 12 729.2 10 038.6 7 796.5 5 955.3	67 344'7 51 429'9 38 700'7 28 662'1 20 865'6	432°54 395°67 356°99 317°21 277°36	2 873'51 2 440'97 2 045'30 1 688'31 1 371'10	14 594'24 11 720'73 9 279'76 7 234'46 5 546'15	80 81 82 83 84
85 86 87 88 89	1 181.3 701.26 522.43 919.81	4 467'4 3 286'08 2 366'13 1 664'57 1 141'84	14 910'3 10 442'87 7 156'79 4 790'66 .3 126'09	238·23 200·34 165·08 132·67 103·82	1 093.74 855.51 655.17 490.09 357.42	4 175.05 3 081.31 2 225.80 1 570.63 1 080.54	85 86 87 88 89
90 91 92 93 94	268·55 184·10 122·27 78·168 48·189	762.03 493.48 309.38 187.111 108.943	1 984°25 1 222°22 728°74 419°355 232°244	79'182 58'222 41'700 28'447 18'898	253.604 174.422 116.200 74.500 46.053	723'116 469'512 295'090 178'890 104'390	90 91 92 93 94
95 96 97 98 99	28·346 15·987 8·495 9 4·308 3	7.925 1 3.616 8	13.718 2 5.793 1	2°111 9	8·174 o 4·152 9 2·041 o	7.656 1 3.503 2	97 98 99
100 101 102	.966 2 .406 c .132 7	538 7	671 4	*265 3		1°462 2 °525 5 °130 1	101

 $\mathbf{OM}(5)$ logarithms and co-logarithms of D_x , \mathbb{N}_x , C_x , M_x $\mathbf{2}_{\mathsf{CENT}}$.

x	$\log D_x$	$\log N_x$	$\log C_x$	$\log M_x$	$\operatorname{col} \mathrm{D}_x$	$col N_x$	$\operatorname{col} \operatorname{C}_x$	$\operatorname{col} \mathrm{M}_x$	x
10	4'944 7° '933 42 '922 14 '910 84 '899 53	6·425 77	2.723 62	4.553 63	5.055 30	7.574 23	3.276 38	5:446 37	10
11		·411 18	.715 02	.547 16	.066 58	*588 82	.284 98	:452 84	11
12		·396 48	.705 10	.540 72	.077 86	*603 52	.294 90	:459 28	12
13		·381 66	.695 84	.534 33	.089 16	*618 34	.304 16	:465 67	13
14		·366 72	.686 58	.527 99	.100 47	*633 28	.313 42	:472 01	14
15	*888 21	351 65	677 98	'521 68	111 79	648 35	'322 02	'478 32	15
16	*876 87	336 45	669 37	'515 41	123 13	663 55	'330 63	'484 59	16
17	*865 52	321 11	661 44	'509 18	134 48	678 89	'338 56	'490 82	17
18	*854 14	305 62	652 84	'502 97	145 86	694 38	'347 16	'497 03	18
19	*842 74	289 99	644 24	'496 79	157 26	710 01	'355 76	'503 21	19
20	*831 33	°274 19	636 96	'490 65	168 67	725 81	363 04	'509 35	20
21	*819 89	°258 24	630 34	'484 52	180 11	741 76	369 66	'515 48	21
22	*808 41	°242 12	622 40	'478 41	191 59	757 88	377 60	'521 59	22
23	*796 92	°225 82	615 76	'472 31	203 08	774 18	384 24	'527 69	23
24	*785 39	°209 33	609 12	'466 23	214 61	790 67	390 88	'533 77	24
25	773 83	'192 65	.603 76	'460 15	·226 17	·807 35	'396 24	539 85	25
26	762 22	'175 77	.597 74	'454 06	·237 78	·824 23	'402 26	545 94	26
27	750 58	'158 68	.592 34	'447 97	·249 42	·841 32	'407 66	552 03	27
28	738 89	'141 37	.588 18	'441 88	·261 11	·858 63	'411 82	558 12	28
29	727 15	'123 83	.583 35	'435 75	·272 85	·876 17	'416 65	564 25	29
30	715 35	106 05	.580 35	'429 61	*284 65	.893 95	'419 65	'570 39	30
31	703 50	088 02	.576 66	'423 42	*296 50	.911 98	'423 34	'576 58	31
32	691 57	069 72	.573 53	'417 19	*308 43	.930 28	'426 47	'582 81	32
33	679 59	051 15	.572 11	'410 92	*320 41	.948 85	'427 89	'589 08	33
34	667 51	032 29	.570 57	'404 58	*332 49	.967 71	'429 43	'595 42	34
35	.655 35	'013 12	.569 49	398 17	'344 65	- '986 88	'430 51	'601 83	35
36	.643 10	5'993 63	.568 85	391 68	'356 90	6' '006 37	'431 15	'608 32	36
37	.630 75	'973 81	.569 72	385 10	'369 25	'026 19	'430 28	'614 90	37
38	.618 29	'953 64	.570 93	378 40	'381 71	'046 36	'429 07	'621 60	38
39	.605 70	'933 10	.572 45	371 59	'394 30	'066 90	'427 55	'628 41	39
40	*592 97	'912 16	574 76	'364 63	'407 03	087 84	'425 24	'635 37	40
41	*580 11	'890 82	577 81	'357 53	'419 89	109 18	'422 19	'642 47	41
42	*567 08	'869 05	582 02	'350 26	'432 92	130 95	'417 98	'649 74	42
43	*553 87	'846 82	586 32	'342 79	'446 13	153 18	'413 68	'657 21	43
44	*540 47	'824 12	591 17	'335 11	'459 53	175 88	'408 83	'664 89	44
45	*526 86	.800 91	*597 39	327 21	'473 14	199 09	'402 61	.672 79	45
46	*513 02	.777 16	*603 54	319 04	'486 98	222 84	'396 46	.680 96	46
47	*498 93	.752 86	*610 86	310 60	'501 07	247 14	'389 14	.689 40	47
48	*484 55	.727 95	*618 40	301 84	'515 45	272 05	'381 60	.698 16	48
49	*469 88	.702 42	*626 52	292 74	'530 12	297 58	'373 48	.707 26	49
50	'454 88	.676 22	.635 11	.283 28	.545 12	'323 78	364 89	716 72	50
51	'439 52	.649 32	.644 11	.273 40	.560 48	'350 68	355 89	726 60	51
52	'423 77	.621 66	.653 43	.263 08	.576 23	'378 34	346 57	736 92	52
53	'407 59	.593 22	.663 67	.252 28	.592 41	'406 78	336 33	747 72	53
54	'390 92	.563 93	.673 74	.240 93	.609 08	'436 07	326 26	759 07	54

 $\mathbf{O^{M(5)}}$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{2}_{\text{cent.}}^{\text{per}}$

							2,0, -0,		
x	$\log D_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathbf{M}_x$	$\begin{bmatrix} x \end{bmatrix}$
55	4°373 74	5.533 74	2.683 93	4°229 01	5.626 26	6·466 26	3·316 07	5.770 99	55
56	°356 00	.502 61	.694 20	°216 45	.644 00	·497 39	·305 80	.783 55	56
57	°337 64	.470 46	.704 77	°203 20	.662 36	·529 54	·295 23	.796 80	57
58	°318 60	.437 23	.715 05	°189 19	.681 40	·562 77	·284 95	.810 81	58
59	°298 82	.402 86	.725 04	°174 37	.701 18	·597 14	·274 96	.825 63	59
60	'278 23	'367 26	735 22	158 65	'721 77	'632 74	'264 78	·841 35	60
61	'256 76	'330 36	744 86	141 95	'743 24	'669 64	'255 14	·858 05	61
62	'234 31	'292 06	753 76	124 19	'765 69	'707 94	'246 24	·875 81	62
63	'210 81	'252 27	762 40	105 28	'789 19	'747 73	'237 60	·894 72	63
64	'186 14	'210 89	769 98	085 09	'813 86	'789 11	'230 02	·914 91	64
65	160 20	°167 79	776 98	°063 55	.839 80	.832 21	'223 02	'936 45	65
66	132 88	°122 87	782 67	°040 50	.867 12	.877 13	'217 33	'959 50	66
67	104 03	°075 99	787 18	°015 82	.895 97	.924 01	'212 82	'984 18	67
68	073 53	°027 00	790 58	3°989 38	.926 47	.973 00	'209 42	4'010 62	68
69	041 21	4°975 75	792 09	°960 99	.958 79	5.024 25	'207 91	'039 01	69
70 71 72 73 74	006 90 3.970 42 931 55 890 08	'922 07 '865 78 '806 67 '744 53 '679 12	791 99 789 88 785 65 778 89 769 29	'930 51 '897 74 '862 46 '824 46 '783 48	.993 10 4.029 58 .068 45 .109 92 .154 24	'077 93 '134 22 '193 33 '255 47 '320 88	'208 01 '210 12 '214 35 '221 11 '230 71	'069 49 '102 26 '137 54 '175 54 '216 52	70 71 72 73 74
75	'798 33	'610 19	756 66	739 27	'201 67	'389 81	'243 34	260 73	75
76	'747 49	'537 45	740 74	691 54	'252 51	'462 55	'259 26	308 46	76
77	'692 93	'460 59	721 18	639 95	'307 07	'539 41	'278 82	360 05	77
78	'634 28	'379 27	697 35	584 16	'365 72	'620 73	'302 65	415 84	78
79	'571 18	'293 15	669 16	523 79	'428 82	'706 85	'330 84	476 21	79
80	°503 19	201 80	636 03	'458 41	'496 81	'798 20	'363 97	'541 59	80
81	°429 84	104 80	597 33	'387 56	'570 16	'895 20	'402 67	'612 44	81
82	°350 66	001 67	552 65	'310 76	'649 34	'998 33	'447 35	'689 24	82
83	°265 10	3.891 90	501 34	'227 45	'734 90	\$\overline{4}\text{108 10}	'498 66	'772 55	83
84	°172 57	774 90	443 05	'137 07	'827 43	'225 10	'556 95	'862 93	84
85	°072 37	'650 05	'376 99	°038 91	. 927 63	'349 95	623 01	-'961 09	85
86	2°963 76	'516 68	'301 78	2'932 23	3.036 24	'483 32	698 22	3'067 77	86
87	°846 07	'374 04	'217 70	°816 35	. 153 93	'625 96	782 30	'183 65	87
88	°718 27	'221 30	'122 76	°690 28	. 281 73	'778 70	877 24	'309 72	88
89	°579 57	'057 61	'016 27	°553 18	. 420 43	'942 39	983 73	'446 82	89
90	'429 02	2.881 97	1.898 63	'404 16	.570 98	3.118 03	2·101 37	'595 84	90
91	'265 05	.693 27	.765 09	'241 60	.734 95	.306 73	·234 91	'758 40	91
92	'087 31	.490 49	.620 14	'065 21	.912 69	.509 51	·379 86	'934 79	92
93	1'893 03	.272 10	.454 03	1'872 16	2.106 97	.727 90	·545 97	2'127 84	93
94	'682 95	.037 20	.276 41	'663 26	.317 05	.962 80	·723 59	'336 74	94
95 96 97 98 99	'452 50 '203 77 0'929 21 '634 30 '324 67	1.783 57 .510 65 .215 40 0.899 00 .558 32	°072 01 0°855 98 °604 34 °324 67 °043 07	°433 85 °186 15 °0'912 43 °618 35 °309 84	'547 5° '796 23 T'070 79 '365 70 '675 33	2.216 43 .489 35 .784 60 1.101 00 .441 68	'675 33 '956 93	.266 15 .813 85 1.087 57 .381 65 .690 16	95 96 97 98 99
100	1.985 08	177 51	1°733 44	7.971 60	0'014 92	·822 49	0°266 56	'402 96	100
101	.608 20	1731 35	°423 81	.597 04	'391 50	o·268 65	°576 19		101
102	.122 78	122 78	°114 18	.114 18	'877 22	·877 22	°885 82		102

 $\mathbf{O^{M(5)}}$ values of a_x , A_x , P_x . Logarithms of a_x , A_x , P_x . $\mathbf{2}_{cent}$.

x	a_x	A_x	P_x	$\log a_x$	$\log A_x$	$\log P_x$	x
10	29°274	'40 638	°01 342	1'481 07 '477 76 '474 34 '470 82 '467 19	7.608 93	2.127 86	10
11	29°044	'41 090	°01 368		.613 74	.135 98	11
12	28°808	'41 551	°01 394		.618 58	.144 24	12
13	28°568	'42 023	°01 421		.623 49	.152 67	13
14	28°322	'42 507	°01 450		.628 46	.161 27	14
15	28.070	'43 000	'01 479 '01 510 '01 542 '01 575 '01 610	°463 44	*633 47	'170 03	15
16	27.813	'43 505		°459 58	*638 54	'178 96	16
17	27.549	'44 021		°455 59	*643 66	'188 07	17
18	27.280	'44 548		°451 48	*648 83	'197 35	18
19	27.005	'45 087		°447 25	*654 05	'206 80	19
20	26.725	'45 637	°01 646	'442 86	659 32	216 46	20
21	26.438	'46 199	°01 684	'438 35	664 63	226 28	21
22	26.146	'46 774	°01 723	'433 71	670 00	236 29	22
23	25.847	'47 358	°01 764	'428 90	675 39	246 49	23
24	25.542	'47 956	°01 807	'423 94	680 84	256 90	24
25	25.231	'48 565 '49 186 '49 818 '50 465 '51 121	°01 851	'418 82	'686 32	'267 50	25
26	24.915		°01 898	'413 55	'691 84	'278 29	26
27	24.592		°01 947	'408 10	'697 39	'289 29	27
28	24.263		°01 998	'402 48	'702 99	'300 51	28
29	23.928		°02 051	'396 68	'708 60	'311 92	29
30	23.587	51 792	°02 106	390 70	'714 26 '719 92 '725 62 '731 33 '737 07	323 56	30
31	23.239	52 471	°02 165	384 52		335 40	31
32	22.887	53 164	°02 226	378 15		347 47	32
33	22.527	53 868	°02 290	371 56		359 77	33
34	22.162	54 585	°02 357	364 78		372 29	34
35	21'791	55 312	°02 427	357 77	'742 82	'385 05	35
36	21'415	56 051	°02 501	35° 53	'748 58	'398 05	36
37	21'032	56 800	°02 578	343 °6	'754 35	'411 29	37
38	20'645	57 559	°02 659	335 35	'760 11	'424 76	38
39	20'252	58 330	°02 745	327 4°	'765 89	'438 49	39
40	19.854	'59 110	'02 834	'319 19	771 66	*452 47	40
41	19.451	'59 899	'02 929	'310 71	777 42	*466 71	41
42	19.043	'60 699	'03 028	'301 97	783 18	*481 21	42
43	18.632	'61 506	'03 133	'292 95	788 92	*495 97	43
44	18.215	'62 322	'03 243	'283 65	794 64	*510 99	44
45	17'795	'63 147	°03 360	274 05	'800 35	526 30	45
46	17'372	'63 976	°03 482	264 14	'806 02	541 88	46
47	16'944	'64 814	°03 612	253 93	'811 67	557 74	47
48	16'515	'65 658	°03 749	243 40	'817 29	573 89	48
49	16'082	'66 506	°03 893	232 54	'822 86	590 32	49
50	15.647	'67 360	°04 046	*221 34	*828 40	.607 06	50
51	15.210	'68 215	°04 208	*209 80	*833 88	.624 08	51
52	14.772	'69 073	°04 379	*197 89	*839 31	.641 42	52
53	14.333	'69 934	°04 561	*185 63	*844 69	.659 06	53
54	13.894	'70 796	°04 753	*173 01	*850 01	.677 00	54

OM(5) VALUES OF a_x , A_x , P_x . LOGARITHMS OF a_x , A_x , P_x 2 PER CENT

x	a_x	A_x	P_x	$\log a_x$	$\log A_x$	$\log P_x$	x
55	13.455	71 659	°04 958	1.160 00	7.855 27	2.695 27	55
56	13.015	72 519	°05 174	.146 61	.860 45	.713 84	56
57	12.277	73 377	°05 404	.132 82	.865 56	.732 74	57
58	12.141	74 232	°05 649	.118 63	.870 59	.751 96	58
59	11.707	75 084	°05 909	.104 04	.875 55	.771 51	59
60	11.275	75 931	°06 186	°089 03	*880 42	*791 39	60
61	10.847	76 770	°06 480	°073 60	*885 19	*811 59	61
62	10.422	77 603	°06 794	°057 75	*889 88	*832 13	62
63	10.002	78 428	°07 129	°041 46	*894 47	*853 01	63
64	9.586	79 241	°07 485	°024 75	*898 95	*874 20	64
65	9°176	80 048	°07 866	°007 59	'903 35	'895 76	65
66	8°772	80 839	°08 272	0°989 99	'907 62	'917 63	66
67	8°375	81 619	°08 706	°971 96	'911 79	'939 83	67
68	7°984	82 385	°09 170	°953 47	'915 85	'962 38	68
69	7°601	83 134	°09 666	°934 54	'919 78	'985 24	69
70	7.226	.83 871	'10 196 '10 764 '11 371 '12 021 '12 716	'915 17	'923 61	7.008 44	70
71	6.859	.84 590		'895 36	'927 32	031 96	71
72	6.201	.85 292		'875 12	'930 91	055 79	72
73	6.152	.85 977		'854 45	'934 38	079 93	73
74	5.813	.86 640		'833 36	'937 72	104 36	74
75 76 77 78 79	5.484 5.165 4.857 4.559 4.272	·87 285 ·87 912 ·88 516 ·89 100 ·89 662	13 461 14 259 15 113 16 028 17 007	*811 86 *789 96 *767 66 *744 99 *721 97	'940 94 '944 05 '947 02 '949 88 '952 61	129 08 154 09 179 36 204 89	75 76 77 78 79
80	3.996	'90 203	18 056	698 61	.955 22	°256 61	80
81	3.731	'90 724	19 175	674 96	.957 72	°282 76	81
82	3.477	'91 222	20 375	651 01	.960 10	°309 09	82
83	3.234	'91 696	21 655	626 80	.962 35	°335 55	83
84	3.003	'92 151	23 023	602 33	.964 50	°362 17	84
85	2°782	'92 585	°24 483	*577 68	'966 54	388 86	85
86	2°572	'92 997	°26 035	*552 92	'968 47	415 55	86
87	2°373	'93 386	°27 689	*527 97	'970 28	442 31	87
88	2°184	'93 758	°29 443	*503 03	'972 01	468 98	88
89	2°006	'94 104	°31 302	*478 04	'973 61	495 57	89
90 91 92 93 94	1.838 1.681 1.394 1.394	94 437 94 744 95 039 95 308 95 567	'33 281 '35 345 '37 560 '39 816 '42 273	452 95 428 22 403 18 379 07 354 25	'975 14 '976 55 '977 90 '979 13 '980 31	522 19 548 33 574 72 600 06 626 06	90 91 92 93 94
95	1°143	'95 797	'44 697	'331 07	'981 35	.650 28	95
96	1°027	'96 024	'47 370	'306 88	'982 38	.675 50	96
97	'933	'96 210	'49 777	'286 19	'983 22	.697 03	97
98	'839	'96 394	'52 402	'264 70	'984 05	.719 35	98
99	'713	'96 643	'56 431	'233 65	'985 17	.751 52	99
100	°558	°96 944	.62 243	°192 43	'986 52	'794 °9	100
101	'327	°97 396	.73 399	°122 85	'988 54	'865 69	101
102	'000	°98 039	.98 039	°000 00	'991 40	'991 40	102



O^{M(5)}

$2^{\frac{1}{4}}$ PER CENT.

CONSTANTS.

Constant.	Number.	Logarithm.
i $(1+i)$ $(1+i)^{\frac{1}{2}}$ $(1+i)^{\frac{1}{4}}$ v $v^{\frac{1}{3}}$ $v^{\frac{1}{4}}$ d	'022 5 1'022 5 1'011 187 4 1'005 578 2 '977 995 1 '988 936 4 '994 452 8	2'352 182 5 0'009 663 3 0'004 831 7 0'002 415 8 T'990 336 7 T'995 168 3 T'997 584 2
δ	°022 004 9 °022 250 6	2·342 519 2 2·347 341 9

 $O^{M(5)}$

COMMUTATION TABLE

 $2^{\frac{1}{4}}$ PER CENT.

x	D_x	\mathbb{N}_x	S_x	C_x	\mathbf{M}_x	R_x	x
10	\$5 914	2 465 807	55 356 403	515°15	31 654*11	1 247 694'51	10
11	\$3 508	2 379 893	52 890 596	503°81	31 138*96	1 216 040'40	11
12	\$1 167	2 296 385	50 510 703	491°23	30 635*15	1 184 901'44	12
13	78 890	2 215 218	48 214 318	479°68	30 143*92	1 154 266'29	13
14	76 674	2 136 328	45 999 100	468°41	29 664*24	1 124 122'37	14
15	74 518	2 059 654	43 862 772	458.10	29 195.83	1 094 458'13	15
16	72 420	1 985 136	41 803 118	448.02	28 737.73	1 065 262'30	16
17	70 379	1 912 716	39 817 982	438.83	28 289.71	1 036 524'57	17
18	68 391	1 842 337	37 905 266	429.18	27 850.88	1 008 234'86	18
19	66 457	1 773 946	36 062 929	419.73	27 421.70	980 383'98	19
20	64 575	1 707 489	34 288 983	411.75	27 001'97	952 962'28	20
21	62 742	1 642 914	32 581 494	404.53	26 590'22	925 960'31	21
22	60 957	1 580 172	30 938 580	396.23	26 185'69	899 370'09	22
23	59 220	1 519 215	29 358 408	389.27	25 789'46	873 184'40	23
24	57 527	1 459 995	27 839 193	382.42	25 400'19	847 394'94	24
25	55 879	1 402 468	26 379 198	376.81	25 017'77	821 994'75	25
26	54 273	1 346 589	24 976 730	370.72	24 640'96	796 976'98	26
27	52 708	1 292 316	23 630 141	365.24	24 270'24	772 336'02	27
28	51 182	1 239 608	22 337 825	360.87	23 905'00	748 065'78	28
29	49 695	1 188 426	21 098 217	356.01	23 544'13	724 160'78	29
30	48 246	1 138 731	19 909 791	352.69	23 188·12	700 616 65	30
31	46 831	1 090 485	18 771 060	348.85	22 835·43	677 428 53	31
32	45 452	1 043 654	17 680 575	345.50	22 486·58	654 593 10	32
33	44 106	998 202	16 636 921	343.53	22 141·08	632 106 52	33
34	42 792	954 096	15 638 719	341.47	21 797·55	609 965 44	34
35	41 509	911 304	14 684 623	339'79	21 456°08	588 167.89	35
36	40 256	869 795	13 773 319.	338'46	21 116°29	566 711.81	36
37	39 032	829 539	12 903 524	338'31	20 777°83	545 595.52	37
38	37 835	790 507	12 073 985	338'43	20 439°52	524 817.69	38
39	36 664	752 672	11 283 478	338'78	20 101°09	504 378.17	39
40	35 518	716 008	10 530 806	339°76	19 762°31	484 277°08	40
41	34 397	680 490	9 814 798	341°32	19 422°55	464 514°77	41
42	33 298	646 093	9 134 308	343°80	19 081°23	445 092°22	42
43	32 222	612 795	8 488 215	346°37	18 737°43	426 010°99	43
44	31 167	580 573	7 875 420	349°41	18 391°06	407 273°56	44
45	30 131	549 406	7 294 847	353.58	18 041'65	388 882°50	45
46	29 115	519 275	6 745 441	357.74	17 688'07	370 840°85	46
47	28 116	490 160	6 226 166	362.93	17 330'33	353 152°78	47
48	27 135	462 044	5 736 006	368.39	16 967'40	335 822°45	48
49	26 169	434 909	5 273 962	374.42	16 599'01	318 855°05	49
50	25 219	408 740	4 839 053	380.97	16 224'59	302 256°04	50
51	24 283	383 521	4 430 313	387.99	15 843'62	286 031°45	51
52	23 361	359 238	4 046 792	395.44	15 455'63	270 187°83	52
53	22 451	335 877	3 687 554	403.88	15 060'19	254 732°20	53
54	21 553	313 426	3 351 677	412.35	14 656'31	239 672°01	54
			M - D + T				

 $N_x = D_x + D_{x+1} + \dots$ $S_x = N_x + N_{x+1} + \dots$

 $0^{M(5)}$

COMMUTATION TABLE

 $2^{\frac{1}{4}}$ PER CENT.

			1				
x	D_x	\mathbb{N}_x	\mathbb{S}_x	\mathbf{C}_x	M_x	R_x	x
55 56 57 58 59	20 667. 18 925. 18 069.	271 206° 251 415° 232 490°	2 746 378 [°] 2 475 172 [°] 2 223 757	449.08		225 015'70 210 771'74 196 948'89 183 556'17 170 603'10	55 56 57 58 59
60 61 62 63 64	16 385° 14 736° 14 736° 14 736°	180 814.	1 579 647' 1 398 833' 1 233 575'	477.46	12 045'59 11 577'46 11 100'00 10 613'84 10 119'12	158 099'11 146 053'52 134 476'06 123 376'06 112 762'22	60 61 62 63 64
65 66 67 68 69	12 334° 11 553° 10 785° 10 029° 9 286°4	123 471° 111 137° 99 584° 88 799° 78 769°5	822 986° 711 849° 612 265°	509°11 514°57 518°66 521°46 522°00	9 616'92 9 107'81 8 593'24 8 074'58 7 553'12	102 643'10 93 026'18 83 918'37 75 325'13 67 250'55	65 66 67 68 69
70 71 72 73 74	8 560°1 7 851°1 7 161°6 6 493°4 5 849°1	69 483'1 60 923'0 53 071'9 45 910'3 39 416'9	375 213.4 314 290.4 261 218.5	520.61 516.81 510.56 501.44 489.28	7 031°12 6 510°51 5 993°70 5 483°14 4 981°70	59 697°43 52 666°31 46 155°80 40 162°10 34 678°96	70 71 72 73 74
75 76 77 78 79	5 231°1 4 641°9 4 083°8 3 559°2 3 070°4	33 567.8 28 336.7 23 694.8 19 611.0 16 051.8	142 323.5	474.09 455.90 434.76 410.54 383.80	4 492°42 4 018°33 3 562°43 2 717°13	29 697 26 25 204 84 21 186 51 17 624 08 14 496 41	75 76 77 78 79
80 81 82 83 84	2 619°0 2 206°6 1 834°4 1 502°6 1 211°3	12 981.4 10 362.4 8 155.8 6 321.4 4 818.8	54 629°2 41 647'8 31 285°4 23 129°6 16 808°2	354.74 323.71 291.35 258.25 225.26	2 333°33 1 978°59 1 654°88 1 363°53 1 105°28	11 779 ² 8 9 445 ⁹ 5 7 467 ³ 6 5 812 ⁴ 8 4 448 ⁹ 5	80 81 82 83 84
85 86 87 88 89	959'42' 745'30 566'99 421'42 3°5'45	3 607°52 2 648°10 1 902°80 1 335°81 914°39	11 989 38 8 381 86 5 733 76 3 830 96 2 495 15	193.00 161.91 133.09 106.69 83.289	880°02 687°02 525°11 392°02 285°333	3 343.67 2 463.65 1 776.63 1 251.52 859.501	85 86 87 88 89
90 91 92 93 94	215'44 147'33 97'611 62'253 38'283	608'94 393'50 246'175 148'564 86'311	1 580·76 971·82 578·323 332·148 183·584	63°369 46°481 33°210 22°600 14°976	202.044 138.675 92.194 58.984 36.384	574'168 372'124 233'449 141'255 82'271	90 91 92 93 94
95 96 97 98 99	22'465 12'639 6'700 2 3'3 ⁸ 9 3 1'657 4	6'223 5 2'834 2	10.758 3 4.534 8	1.657 4 .864 5	12°076 3 6°415 8 3°252 4 1°595 0	24°478 9 12°402 6 5°986 8 2°734 4	96 97 98 99
100 101 102	'756 4 '317 6 '103 4	420 4	*523 8	206 7	.307 8	*408 9	101

 $\mathbf{0M}(5)$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{2}\frac{1}{4}$ dent.

x	$\log D_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathrm{M}_x$	x
10 11 12 13 14	4.934 o6 .921 73 .909 38 .897 o2 .884 65	6·391 96 ·376 56 ·361 05 ·345 41 ·329 67	2.711 93 .702 27 .691 28 .680 95 .670 63	4.500 43 .493 30 .486 22 .479 20 .472 23 .465 32	5.065 94 .078 27 .090 62 .102 98 .115 35	7.608 04 .623 44 .638 95 .654 59 .670 33	3·288 07 ·297 73 ·308 72 ·319 05 ·329 37 ·339 04	5 499 57 5 5 6 70 5 1 3 78 5 2 0 80 5 2 7 77 5 3 4 6 8	10 11 12 13 14
15 16 17 18 19	859 86 847 44 835 00 822 54	'313 79 '297 79 '281 65 '265 37 '248 94	651 30 642 30 632 64 622 98	*458 45 *451 63 *444 84 *438 09	127 74 140 14 152 56 165 00 177 46	702 21 718 35 734 63 751 06	348 70 357 70 367 36 377 02	541 55 548 37 555 16 561 91	16 17 18 19
20 21 22 23 24	*810 07 '797 56 '785 02 '772 47 '759 87	°232 36 °215 61 °198 70 °181 62 °164 35	*614 64 *606 95 *597 95 *590 25 *582 54	'431 40 '424 72 '418 06 '411 44 '404 84	189 93 202 44 214 98 227 53 240 13	'767 64 '784 39 '801 30 '818 38 '835 65	385 36 393 05 402 05 409 75 417 46	568 60 575 28 581 94 588 56 595 16	20 21 22 23 24
25 26 27 28 29	747 25 734 58 721 87 709 12 696 32	'146 89 '129 24 '111 37 '093 28 '074 97	'576 12 '569 04 '562 57 '557 35 '551 46	'398 25 '391 66 '385 07 '378 49 '371 88	.252 75 .265 42 .278 13 .290 88 .303 68	*853 11 *870 76 *888 63 *906 72 *925 03	°423 88 °430 96 °437 43 °442 65 °448 54	601 75 608 34 614 93 621 51 628 12	25 26 27 28 29
30 31 32 33 34	.683 46 .670 54 .657 55 .644 50	056 42 037 62 018 56 5 999 22 979 59	547 39 542 64 538 44 535 96 533 36	365 27 358 61 351 92 345 20 338 41	'316 54 '329 46 '342 45 '355 50 '368 63	.943 58 .962 38 .981 44 6.000 78 .020 41	'452 61 '457 36 '461 56 '464 04 '466 64	634 73 641 39 648 08 654 80 661 59	30 31 32 33 34
35 36 37 38 39	.618 14 .604 83 .591 42 .577 89 .564 23	'959 66 '939 42 '918 84 '897 91 '876 61	'531 22 '529 51 '529 32 '529 47 '529 92	'331 55 '324 62 '317 60 '310 47 '303 22	381 86 395 17 408 58 422 11 435 77	.040 34 .060 58 .081 16 .102 09 .123 39	'468 78 '470 49 '470 68 '470 53 '470 08	.668 45 .675 38 .682 40 .689 53 .696 78	35 36 37 38 39
40 41 42 43 44	'550 45 '536 52 '522 42 '508 15 '493 69	.854 92 .832 82 .810 30 .787 32 .763 86	531 17 533 16 536 30 539 55 543 33	*295 84 *288 31 *280 61 *272 71 *264 61	'449 55 '463 48 '477 58 '491 85 '506 31	145 08 167 18 189 70 212 68 236 14	'468 83 '466 84 '463 70 '460 45 '456 67	704 16 711 69 719 39 727 29 735 39	40 41 42 43 44
45 46 47 48 49	'479 02 '464 11 '448 96 '433 52 '417 79	'739 89 '715 40 '690 34 '664 68 '638 40	*548 48 *553 57 *559 82 *566 31 *573 36	'229 62	°520 98 °535 89 °551 04 °566 48 °582 21	*260 11 *284 60 *309 66 *335 32 *361 60	'451 52 '446 43 '440 18 '433 69 '426 64	743 73 752 32 761 19 770 38 779 92	45 46 47 48 49
50 51 52 53 54	'401 73 '385 30 '368 48 '351 24 '333 51	.611 45 .583 79 .555 38 .526 18 .496 14	580 89 588 82 597 09 606 26 615 27	'199 85 '189 09 '177 83	.598 27 .614 70 .631 52 .648 76 .666 49	388 55 416 21 444 62 473 82 503 86	'419 11 '411 18 '402 91 '393 74 '384 73	.789 83 .800 15 .810 91 .822 17 .833 97	50 51 52 53 54

 $\mathbf{OM}(5)$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{2}^{\frac{1}{4}}_{\text{cent.}}$

x	$\log \mathrm{D}_x$	$\log \mathbb{N}_x$	$\log C_x$	$\log M_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	$\operatorname{col} \operatorname{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
55 56 57 58 59 60 61 62	4'315 27 '296 46 '277 04 '256 93 '236 09 '214 45 '191 91 '168 39	5.465 19 .433 30 .400 39 .366 40 .331 27 .294 90 .257 23 .218 16	2.624 40 .633 60 .643 10 .652 32 .661 25 .670 37 .678 94 .686 78	4'153 63 '140 59 '126 87 '112 37 '097 05 '080 83 '063 61 '045 32	5.684 73 .703 54 .722 96 .743 07 .763 91 .785 55 .808 09 .831 61	6.534 81 .566 70 .599 61 .633 60 .668 73 .705 10 .742 77 .781 84	3.375 60 .366 40 .356 90 .347 68 .338 75 .329 63 .321 06 .313 22	5.846 37 .859 41 .873 13 .887 63 .902 95 .919 17 .936 39 .954 68	55 56 57 58 59 60 61 62
63 64 65 66 67	'143 83 '118 10 '091 10 '062 71 '032 80	177 60 135 44 091 56 045 86 4'998 19	'694 36 '700 88 '706 81 '711 44 '714 89	°025 87 °005 14 3°983 04 °959 41 °934 16	*856 17 *881 90 *908 90 *937 29 *967 20	*822 40 *864 56 *908 44 *954 14 \$5001 81	'305 64 '299 12 '293 19 '288 56 '285 11	'974 13 '994 86 4'016 96 '040 59 '065 84	63 64 65 66 67
68 69 70 71	'001 24 3'967 85 '932 48 '894 93	*948 41 *896 36 *841 88 *784 78	'717 23 '717 67 '716 51 '713 33	'907 12 '878 13 '847 02 '813 61	. 998 76 4.032 15 . 067 52 . 105 07	'051 59 '103 64 '158 12 '215 22	'282 77 '282 33 '283 49 '286 67	°121 87 °152 98 °186 39 °222 30	68 69 70 71
72 73 74 75 76	*855 01 *812 47 *767 09 *718 59 *666 70	'724 87 '661 91 '595 68 '525 92 '452 35	708 05 700 22 689 56 675 86 658 87	'777 7° '739 °3 '697 38 '652 48 '604 °5	'144 99 '187 53 '232 91 '281 41 '333 3°	'275 13 '338 09 '404 32 '474 08 '547 65	'291 95 '299 78 '310 44 '324 14 '341 13	'260 97 '302 62 '347 52 '395 95	72 73 74 75 76
77 78 79 80 81	'611 07 '551 35 '487 19 '418 13 '343 73	374 65 292 50 205 52 113 32 015 46	*638 25 '613 36 '584 11 *549 91 *510 16	'551 75 '495 22 '434 11 '367 98 '296 36	'388 93 '448 65 '512 81 '581 87 '656 27	'625 35 '707 50 '794 48 '886 68 '984 54	361 75 386 64 415 89 450 09 489 84	°448 25 °504 78 °565 89 °632 02 °703 64	77 78 79 80 81
82 83 84 85 86	263 48 176 86 083 26 2.982 01	3.911 47 .800 81 .682 94 .557 21	°464 41 °412 04 °352 68 °285 56	°218 77 °134 66 °043 47 2°944 49	.736 52 .823 14 .916 74 3.017 99	4.088 53 199 19 317 06 442 79 577 07	535 59 587 96 647 32 714 44	.781 23 .865 34 .956 53 3.055 51 .163 03	82 83 84 85 86
87 88 89 90	'872 33 '753 57 '624 72 '484 95 '333 33	°422 93 °279 39 °125 74 2°961 13 °784 57	*209 28 *124 14 *028 14 1*920 59 *801 88	*836 97 *720 25 *593 31 *455 35 *305 45	'127 67 '246 43 '375 28 '515 05 '666 67	'720 61 '874 26 3'038 87 '215 43	.790 72 .875 86 .971 86 2.079 41 .198 12	'279 75 '406 69 '544 65 '694 55	87 88 89 90
91 92 93 94 95	'168 30 1'989 50 '794 16 '583 01 '351 50	'594 94 '391 24 '171 91 1'936 07 '681 49	667 28 521 27 354 10 175 41	'142 00 1'964 70 '770 73 '560 91 '330 57	·831 70 2·010 50 ·205 84 ·416 99 ·648 50	'405 06 '608 76 '828 09 2'063 93 '318 51	332 72 478 73 645 90 824 59 1.030 05	2.035 30 2.035 30 229 27 439 09 669 43	91 92 93 94 95
96 97 98 99	'101 71 0'826 09 '530 12 '219 42	'407 61 '111 39 0'794 03 '452 43	752 85 500 15 219 42 7936 76	°081 93 0°807 25 °512 20 °202 76	898 29 1.173 91 469 88 780 58	592 39 888 61 1.205 97 547 57	°247 15 °499 85 °780 58 °0063 24	.918 07 1.192 75 .487 80 .797 24	96 97 98 99
100 101 102	7.878 77 501 13 014 34	°070 70 1°623 66 °014 34	'626 07 '315 37 '004 68	1.863 62 .488 27 .004 68	°121°23 °498 87 °985 66	'929 30 0'376 34 '985 66	373 93 684 63 995 32	'511 73	100 101 102

 $\mathbf{OM}(5)$ values of a_x , A_x , P_x . logarithms of a_x , A_x , P_x $\mathbf{2}^{\frac{1}{4}}_{\text{cent.}}$

x	a_x	A_x	P_x	$\log a_x$	$\log \mathrm{A}_x$	$\log \mathrm{P}_x$	x
10	27.701	°36 844	°01 284	1°457 90	7:566 37	2·108 47	10
11	27.499	°37 288	°01 308	°454 83	:571 57	·116 74	11
12	27.292	°37 743	°01 334	°451 67	:576 84	·125 17	12
13	27.080	°38 210	°01 361	°448 39	:582 18	·133 79	13
14	26.862	°38 688	°01 389	°445 02	:587 58	·142 56	14
15	26.640	'39 180	°01 418	'441 53	593 06	°151 53	15
16	26.411	'39 682	°01 448	'437 93	598 59	°160 66	16
17	26.178	'40 197	°01 479	'434 21	604 19	°169 98	17
18	25.938	'40 723	°01 512	'430 37	609 84	°179 47	18
19	25.693	'41 262	°01 546	'426 40	615 55	°189 15	19
20	25.441	'41 815	°01 581	'422 29	'621 33	°199 04	20
21	25.185	'42 380	°01 618	'418 05	'627 16	°209 11	21
22	24.923	'42 958	°01 657	'413 68	'633 04	°219 36	22
23	24.654	'43 548	°01 698	'409 15	'638 97	°229 82	23
24	24.379	'44 154	°01 740	'404 48	'644 97	°240 49	24
25	24.099	'44 771	°01 784	399 64		°251 36	25
26	23.812	'45 403	°01 830	394 66		°262 42	26
27	23.219	'46 047	°01 878	389 50		°273 70	27
28	23.219	'46 706	°01 928	384 16		°285 21	28
29	22.914	'47 376	°01 981	378 65		°296 91	29
30 31 32 33 34	22.603 22.285 21.632 21.632	*48 063 *48 761 *49 473 *50 200 *50 938	°02 036 °02 094 °02 155 °02 218 °02 285	372 96 367 08 361 01 354 72 348 22	*681 81 *688 07 *694 37 *700 70 *707 04	308 85 320 99 333 36 345 98 358 82	30 31 32 33 34
35	20°955	*51 690	°02 354	341 52	713 41	371 89	35
36	20°607	*52 455	°02 428	334 59	719 79	385 20	36
37	20°253	*53 233	°02 505	327 42	726 18	398 76	37
38	19°894	*54 023	°02 586	320 02	732 58	412 56	38
39	19°529	*54 826	°02 671	312 38	738 99	426 61	39
40	19°159	°55 640	°02 760	'304 47	745 39	*440 92	40
41	18°784	°56 466	°02 854	'296 30	751 79	*455 49	41
42	18°403	°57 3°5	°02 953	'287 88	758 19	*470 31	42
43	18°018	°58 151	°03 058	'279 17	764 56	*485 39	43
44	17°628	°59 009	°03 168	'270 17	770 92	*500 75	44
45	17.234	°59 876	°03 284	260 87	777 25	*516 38	45
46	16.836	°60 753	°03 406	251 29	783 57	*532 28	46
47	16.433	°61 638	°03 536	241 38	789 85	*548 47	47
48	16.028	°62 532	°03 672	231 16	796 10	*564 94	48
49	15.619	°63 429	°03 817	220 61	802 29	*581 68	49
50	15°208	*64 334	°03 969	*209 72	·808 44	°598 72	50
51	14°794	*65 245	°04 131	*198 49	·814 55	°616 06	51
52	14°378	*66 162	°04 302	*186 90	·820 61	°633 71	52
53	13°960	*67 080	°04 484	*174 94	·826 59	°651 65	53
54	13°542	*68 002	°04 676	*162 63	·832 52	°669 89	54

OM(5) VALUES OF a_x , A_x , P_x . LOGARITHMS OF a_x , A_x , P_x $2\frac{1}{4}$ PER CENT.

x	a_x	A_x	P_x	$\log a_x$	$\log \mathrm{A}_x$	$\log P_x$	x
55 56 57 58 59	13°123 12°704 12°285 11°867	·68 922 ·69 844 ·70 767 ·71 687 ·72 604	.04 880 .05 097 .05 327 .05 571 .05 832	1'149 92 '136 84 '123 35 '109 47 '095 18	ī·838 36 ·844 13 ·849 83 ·855 44 ·860 96	2.688 44 .707 29 .726 48 .745 97 .765 78	55 56 57 58 59
60	11°035	73 516	.06 108	°080 45	·866 38	.785 93	60
61	10°623	74 422	.06 403	°065 32	·871 70	.806 38	61
62	10°214	75 323	.06 717	°049 77	·876 93	.827 16	62
63	9°809	76 215	.07 051	°033 77	·882 04	.848 27	63
64	9°407	77 997	.07 408	°017 34	·887 04	.869 70	64
65	9°011	77 972	.07 789	000 46	*891 94	·891 48	65
66	8°619	78 832	.08 195	0.983 15	*896 70	·913 55	66
67	8°234	79 682	.08 629	965 39	*901 36	·935 97	67
68	7°854	80 516	.09 093	947 17	*905 88	·958 71	68
69	7°482	81 335	.09 589	928 51	*910 28	·981 77	69
70	7°117	·82 137	10 119	'909 40	'914 54	7.005 14	70
71	6°760	·82 924	10 686	'889 85	'918 68	.028 83	71
72	6°411	·83 693	11 294	'869 86	'922 69	.052 83	72
73	6°070	·84 442	11 943	'849 44	'926 56	.077 12	73
74	5°739	·85 171	12 639	'828 59	'930 29	.101 70	74
75	5.417	·85 880	13 383	.807 33	'933 89	126 56	75
76	5.105	·86 567	14 181	.785 65	'937 35	151 70	76
77	4.802	·87 233	15 035	.763 58	'940 68	177 10	77
78	4.510	·87 876	15 949	.741 15	'943 87	202 72	78
79	4.228	·88 495	16 927	.718 33	'946 92	228 59	79
80 81 82 83 84	3°957 3°696 3°446 3°207 2°978	·89 094 ·89 666 ·90 217 ·90 740 ·91 245	17 975 19 094 20 291 21 570	.695 19 .671 73 .647 99 .623 95 .599 68	*949 85 *952 63 *955 29 *957 80 *960 21	*254 66 *280 90 *307 30 *333 85 *360 53	80 81 82 83 84
85	2.760	'91 723	'24 394	'575 20	*962 48	387 28	85
86	2.553	'92 181	'25 944	'550 60	*964 64	3414 04	86
87	2.356	'92 615	'27 597	'525 82	*966 68	440 86	87
88	2.170	'93 023	'29 347	'501 02	*968 59	467 57	88
89	1.994	'93 411	'31 205	'476 18	*970 40	494 22	89
90	1.826	'93 782	'33 180	'451 24	'972 12	520 88	90
91	1.671	'94 124	'35 242	'426 64	'973 70	547 06	91
92	1.522	'94 450	'37 451	'401 74	'975 20	573 46	92
93	1.386	'94 748	'39 703	'377 75	'976 57	598 82	93
94	1.255	'95 039	'42 154	'353 06	'977 90	624 84	94
95	1°138	'95 295	'44 574	329 99	'979 07	*649 08	95
96	1°023	'95 548	'47 241	305 90	'980 22	*674 32	96
97	°929	'95 755	'49 643	285 30	'981 16	*695 86	97
98	°836	'95 958	'52 260	263 91	'982 08	*718 17	98
99	°710	'96 237	'56 277	233 01	'983 34	*75° 33	99
100	°556	'96 572	.62 075	'191 93	'984 85	792 92	100
101	°326	'97 082	.73 217	'122 53	'987 14	•864 61	101
102	°000	'97 800	.97 800	'000 00	'990 34	•990 34	102



OM(5)

$2^{\frac{1}{2}}$ per cent.

CONSTANTS.

Constant.	Number.	Logarithm.
$i \\ (1+i) \\ (1+i)^{\frac{1}{2}} \\ (1+i)^{\frac{1}{4}} \\ v \\ v^{\frac{1}{4}}$	'025 1'025 1'012 422 8 1'006 192 3 '975 609 8 '987 729 6	2·397 940 0 0·010 723 9 0·005 361 9 0·002 681 0 7·989 276 1 7·994 638 1
υ [‡] d δ	'993 845 9 '024 390 2 '024 692 6	7 994 936 1 2.387 216 1 2.392 567 0

 $O^{M(5)}$

COMMUTATION TABLE

21 PER

x	D_x	\mathbb{N}_x	\mathbb{S}_x	C_x	\mathbf{M}_x	R_x	x
10	83 841	2 285 453	49 734 881	501.49	28 098.61	1 072 406'35	10
11	81 295	2 201 612	47 449 428	489.26	27 597.12	1 044 307'74	11
12	78 823	2 120 317	45 247 816	475.88	27 107.86	1 016 710'62	12
13	76 424	2 041 494	43 127 499	463.56	26 631.98	989 602'76	13
14	74 997	1 965 070	41 086 005	451.56	26 168.42	962 970'78	14
15	71 838	1 890 973	39 120 935	440°55	25 716.86	936 802'36	15
16	69 645	1 819 135	37 229 962	429°81	25 276.31	911 085'50	16
17	67 517	1 749 490	35 410 827	419°96	24 846.50	885 809'19	17
18	65 450	1 681 973	33 661 337	409°72	24 426.54	860 962'69	18
19	63 444	1 616 523	31 979 364	399°73	24 016.82	836 536'15	19
20	61 497	1 553 079	30 362 841	391°17	23 617 °09	812 519'33	20
21	59 606	1 491 582	28 809 762	383°37	23 225 °92	788 902'24	21
22	57 769	1 431 976	27 318 180	374°59	22 842 °55	765 676'32	22
23	55 9 ⁸ 5	1 374 207	25 886 204	367°11	22 467 °96	742 833'77	23
24	54 ² 53	1 318 222	24 511 997	359°77	22 100 °85	720 365'81	24
25	52 570	1 263 969	23 193 775	353.63	21 741 08	698 264.96	25
26	50 934	1 211 399	21 929 806	347.06	21 387 45	676 523.88	26
27	49 344	1 160 465	20 718 407	341.10	21 040 39	655 136.43	27
28	47 800	1 111 121	19 557 942	336.20	20 699 29	634 096.04	28
29	46 298	1 063 321	18 446 821	330.86	20 363 09	613 396.75	29
30	44 838	1 017 023	17 383 500	326.98	20 032°23	593 033.66	30
31	43 417	972 185	16 366 477	322.63	19 705°25	573 001.43	31
32	42 036	928 768	15 394 292	318.75	19 382°62	553 296.18	32
33	40 691	886 732	14 465 524	316.15	19 063°87	533 913.56	33
34	39 383	846 041	13 578 792	313.50	18 747°72	514 849.69	34
35	38 109	806 658	12 732 751	311'20	18 434°22	496 101'97	35
36	36 868	768 549	11 926 093	309'22	18 123°02	477 667'75	36
37	35 660	731 681	11 157 544	308'33	17 813°80	459 544'73	37
38	34 482	696 021	10 425 863	307'68	17 505°47	441 730'93	38
39	33 333	661 539	9 729 842	307'26	17 197°79	424 225'46	39
40 41 42 43 44	32 213 31 119 30 053 29 010 27 991	595 993 564 874 534 821 505 811	9 068 303 8 440 097 7 844.104 7 279 230 6 744 409	307'39 308'05 309'53 311'09 313'04	16 890.53 16 583.14 16 275.09 15 965.56 15 654.47	407 027 67 390 137 14 373 554 00 357 278 91 341 313 35	40 41 42 43 44
45	26 996	477 820	6 238 598	316°01	15 341 43	325 658·88	45
46	26 021	450 824	5 760 778	318°95	15 025 42	310 317·45	46
47	25 068	424 803	5 309 954	322°79	14 706 47	295 292·03	47
48	24 133	399 735	4 885 151	326°84	14 383 68	280 585·56	48
49	23 218	375 602	4 485 416	331°38	14 056 84	266 201·88	49
50	22 320	352 384	4 109 814	336·36	13 725'46	252 145'04	50
51	21 439	330 064	3 757 430	341·72	13 389'10	238 419'58	51
52	20 575	308 625	3 427 366	347·44	13 047'38	225 030'48	52
53	19 726	288 050	3 118 741	353·99	12 699'94	211 983'10	53
54	18 890	268 324	2 830 691	360·53	12 345'95	199 283'16	54

OM(5)

COMMUTATION TABLE

 $2^{\frac{1}{2}}_{\bar{2}}^{\text{ per}}_{\text{ cent.}}$

x	D_x	\mathbb{N}_x	\mathbb{S}_x	C_x	\mathbf{M}_x	R_x	x
55 56 57 58 59	18 069° 17 261° 16 466° 15 683°	249 434° 231 365° 214 104° 197 638° 181 955°	2 312 933° 2 081 568° 1 867 464°	374'24	11 985.42 11 618.13 11 243.89 10 862.30 10 473.48	186 937'21 174 951'79 163 333'66 152 089'77 141 227'47	55 56 57 58 59
60 61 62 63 64	14 152° 13 403° 11 940° 11 226°	167 044° 152 892° 139 489° 114 883°	1 487 871. 1 320 827. 1 167 935. 1 028 446. 901 623.	403°35 410°38 416°83 423°14 428°49	10 077'55 9 674'20 9 263'82 8 846'99 8 423'85	130 753'99 120 676'44 111 002'24 101 738'42 92 891'43	60 61 62 63 64
65 66 67 68 69	10 524° 9 833°6 9 156°8 8 494°2 7 846°4	103 657° 93 133°1 83 299°5 74 142°7 65 648°5	786 740° 683 083°1 589 950°0 506 650°5 432 507°8	433°32 436°91 439°31 440°60 439°98	7 995'36 7 562'04 7 125'13 6 685'82 6 245'22	84 467°58 76 472°22 68 910°18 61 785°05 55 099°23	65 66 67 68 69
70 71 72 73 74	7 215'1 6 601'4 6 006'9 5 433'2 4 882'1	57 802°1 50 587°0 43 985°6 37 978°7 32 545°5	366 859.3 309 057.2 258 470.2 214 484.6 176 505.9	437.73 433.48 427.19 418.54 407.39	5 805'24 5 367'51 4 934'03 4 506'84 4 088'30	48 854.01 43 048.77 37 681.26 32 747.23 28 240.39	70 71 72 73 74
75 76 77 78 79	4 355.6 3 855.6 3 383.8 2 941.9 2 531.7	27 663 [.] 4 23 307 [.] 8 19 452 [.] 2 16 068 [.] 4 13 126 [.] 5	143 960'4 116 297'0 92 989'2 73 537'0 57 468'6	393.78 377.76 359.36 338.51 315.69	2 211.20 2 284.13 2 200.34 3 284.13	24 152'09 20 471'18 17 184'05 14 274'68 11 724'67	75 76 77 78 79
80 81 82 83 84	2 154.5 1 227.0 986.69	10 594'8 8 440'6 6 630'0 5 128'5 3 901'51	44 342 1 33 747 3 25 306 7 18 676 7 13 548 16	291.08 264.97 237.90 210.35 183.03	1 895.81 1 604.73 1 339.76 1 101.86 891.51	9 513'17 7 617'36 6 012'63 4 672'87	80 81 82 83 84
85 86 87 88 89	779°58 604°13 458°47 339°93 245°79	2 914.82 2 135.24 1 531.11 1 072.64 732.71	9 646.65 6 731.83 4 596.59 3 065.48 1 992.84	156'44 130'92 107'35 85'853 66'856	708.48 552.04 421.12 313.770 227.917	2 679°50 1 971°02 1 418°98 997°862 684°092	85 86 87 88 89
90 91 92 93 94	172'94 117'98 77'970 49'606 30'431	486.92 313.98 195.996 118.026 68.420	1 260°13 773°21 459°225 263°229 145°203	50.742 37.129 26.463 17.964 11.876	161'061 110'319 73'190 46'727 28'763	456°175 295°114 184°795 111°605 64°878	90 91 92 93 94
95 96 97 98 99	17.814 9.997 5 5.287 0 2.668 0	10°177 3 4'890 3 2°222 3	18.619 6 8.442 3 3.552 0	2'490 I 1'30I 5	9°5°5 4 5°038 8 2°548 7 1°247 2	9.723 0 4.684 2 2.135 5	96 97 98 99
100 101 102	'592 5 '247 7 '080 6	328 3	408 9		'57° ° '239 7 '078 6	.3183	101

 $\mathbf{OM}(5)$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{2}^{\frac{1}{2}}_{2}$ cent.

æ	$\log D_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
10	4 [.] 923 46	6·358 97	2.700 26	4.448 68	5.076 54	7.641 03	3 ² 99 74	5.551 32	10
11	[.] 910 06	·342 74	.689 54	.440 86	.089 94	.657 26	310 46	.559 14	11
12	[.] 896 65	·326 40	.677 49	.433 10	.103 35	.673 60	322 51	.566 90	12
13	[.] 883 23	·309 95	.666 11	.425 40	.116 77	.690 05	333 89	.574 60	13
14	[.] 869 80	·293 38	.654 72	.417 78	.130 20	.706 62	345 28	.582 22	14
15 16 17 18 19	'856 35 '842 89 '829 41 '815 91 '802 39	*276 69 *259 87 *242 91 *225 82 *208 58	.644 00 .633 27 .623 21 .612 49 .601 76	'410 22 '402 71 '395 27 '387 86 '380 52	143 65 157 11 170 59 184 09	723 31 740 13 757 09 774 18 791 42	356.00 366.73 376.79 387.51 398.24	.589 78 .597 29 .604 73 .612 14 .619 48	15 16 17 18 19
20	'788 85	191 19	592 36	'373 22	°211 15	·808 81	°407 64	·626 78	20
21	'775 29	173 65	583 62	'365 97	°224 71	·826 35	°416 38	·634 03	21
22	'761 69	155 94	573 55	'358 74	°238 31	·844 06	°426 45	·641 26	22
23	'748 07	138 05	564 80	'351 56	°251 93	·861 95	°435 20	·648 44	23
24	'734 42	119 99	556 03	'344 41	°265 58	·880 01	°443 97	·655 59	24
25	'720 73	°101 74	548 55	337 28	'279 27	*898 26	°451 45	662 72	25
26	'707 01	°083 29	540 40	330 16	'292 99	*916 71	°459 60	669 84	26
27	'693 24	°064 63	532 88	323.05	'306 76	*935 37	°467 12	676 95	27
28	'679 43	°045 76	526 60	315 96	'320 57	*954 24	°473 40	684 04	28
29	'665 56	°026 66	519 64	308 84	'334 44	*973 34	°480 36	691 16	29
30	'651 64	°007 33	'514 52	'301 73	'348 36	-992 67	*485 48	.698 27	30
31	'637 66	5°987 75	'508 71	'294 58	'362 34	6.012 25	*491 29	.705 42	31
32	'623 62	°967 91	'503 44	'287 41	'376 38	-032 09	*496 56	.712 59	32
33	'609 50	°947 79	'499 90	'280 21	'390 50	-052 21	*500 10	.719 79	33
34	'595 31	°927 39	'496 24	'272 95	'404 69	-072 61	*503 76	.727 05	34
35	*581 03	'906 69	'493 04	°265 62	'418 97	'093 31	*506 96	734 38	35
36	*566 65	'885 67	'490 27	°258 23	'433 35	'114 33	*509 73	741 77	36
37	*552 18	'864 32	'489 02	°250 76	'447 82	'135 68	*510 98	749 24	37
38	*537 59	'842 62	'488 10	°243 17	'462 41	'157 38	*511 90	756 83	38
39	*522 87	'820 56	'487 50	°235 47	'477 13	'179 44	*512 50	764 53	39
40	*508 03	798 10	*487 69	°227 64	*491 97	*201 90	'512 31	'772 36	40
41	*493 03	775 24	*488 62	°219 67	*506 97	*224 76	'511 38	'780 33	41
42	*477 88	751 95	*490 70	°211 52	*522 12	*248 05	'509 30	'788 48	42
43	*462 55	728 21	*492 88	°203 19	*537 45	*271 79	'507 12	'796 81	43
44	*447 02	703 99	*495 61	°194 64	*552 98	*296 01	'504 39	'805 36	44
45	'431 29	.679 26	'499 70	185 86	.568 71	'320 74	'500 30	*814 14	45
46	'415 33	.654 01	'503 73	176 82	.584 67	'345 99	'496 27	*823 18	46
47	'399 11	.628 19	'508 92	167 50	.600 89	'371 81	'491 08	*832 50	47
48	'382 62	.601 77	'514 34	157 88	.617 38	'398 23	'485 66	*842 12	48
49	'365 82	.574 73	'520 33	147 89	.634 18	'425 27	'479 67	*852 11	49
50	'348 70	547 02	.526 80	'137 52 '126 75 '115 52 '103 80 '091 53	.651 30	'452 98	'473 20	·862 48	50
51	'331 21	518 60	.533 67		.668 79	'481 40	'466 33	·873 25	51
52	'313 34	489 43	.540 88		.686 66	'510 57	'459 12	·884 48	52
53	'295 03	459 47	.548 99		.704 97	'540 53	'451 01	·896 20	53
54	'276 24	428 66	.556 94		.723 76	'571 34	'443 06	·908 47	54

QM(5) LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x $2\frac{1}{2}$ per cent.

x	$\log D_x$	$\log \mathbb{N}_x$	$\log C_x$	$\log M_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathbf{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
55 56 57 58	4.256 94 .237 07 .216 59 .195 42	5'396 96 '364 30 '330 63 '295 87	2°565 00 °573 15 °581 59 °589 75	4.078 66 .065 13 .050 92 .035 92	5°743 06 °762 93 °783 41 °804 58	6.603 04 .635 70 .669 37 .704 13	3'435 00 '426 85 '418 41 '410 25	5 921 34 934 87 949 08 964 08	55 56 57 58 59
60 61 62 63	173 52 150 81 127 21 102 64 077 01	°259 96 °222 83 °184 38 °144 54 °103 20	'597 62 '605 68 '613 19 '619 96 '626 48	°020 09 °003 35 3°985 62 °966 79 °946 80	·826 48 ·849 19 ·872 79 ·897 36 ·922 99	'74° °4 '777 17 '815 62 '855 46 '896 80	'402 38 '394 32 '386 81 '380 04 '373 52	'979 91 '996 65 4'014 38 '033 21 '053 20	60 61 62 63
64 65 66 67 68	*050 22 *022 16 3*992 71 *961 75 *929 12	.060 26 .015 60 4.969 10 .920 64 .870 07	631 94 636 81 640 39 642 77 644 05	.925 51 .902 84 .878 64 .852 79 .825 15	949 78 977 84 4.007 29 038 25 070 88	'939 74 '984 40 5'030 90 '079 36 '129 93	368 06 363 19 359 61 357 23 355 95	'074 49 '097 16 '121 36 '147 21 '174 85	64 65 66 67 68
69 70 71 72 73	.894 67 .858 24 .819 63 .778 65 .735 05	'817 22 '761 94 '704 04 '643 31 '579 54	643 43 641 21 636 97 630 63 621 74	795 55 763 82 729 77 693 20 653 87	'105 33 '141 76 '180 37 '221 35 '264 95	182 78 238 06 295 96 356 69 420 46	356 57 358 79 363 03 369 37 378 26	204 45 236 18 270 23 306 80 346 13 388 46	69 70 71 72 73 74
74 75 76 77 78	.688 61 .639 05 .586 09 .529 41 .468 63	'512 49 '441 91 '367 50 '288 97 '205 97	*595 26 *577 21 *555 53 *529 57	'565 95 '516 82 '463 80 '406 54	'311 39 '360 95 '413 91 '470 59 '531 37	'487 51 '558 09 '632 50 '711 03 '794 03 '881 85	389 99 '404 74 '422 79 '444 47 '470 43 '500 74	'434 °5 '483 18 '536 20 '593 46 '655 31	75 76 77 78 79
79 80 81 82 83	'403 41 '333 29 '257 82 '176 52 '088 83	'118 15 '025 09 3'926 37 '821 51 '709 99	'499 26 '464 01 '423 19 '376 39 '322 95	'344 69 '277 79 '205 40 '127 03 '042 14	.596 59 .666 71 .742 18 .823 48	.974 91 4.073 63 .178 49 .290 01 .408 77	535 99 576 81 623 61 677 05 737 47	722 21 794 60 872 97 957 86 3.049 87	80 81 82 83 84
84 85 86 87 88	2.994 18 .891 86 .781.13 .661 31	'591 23 '464 61 '329 44 '185 01 '030 45	'262 53 '194 36 '117 02 '030 81 1'933 76	2.950 13 .850 33 .741 97 .624 41 .496 61	3.005 82 .108 14 .218 87 .338 69 .468 61 .609 44	535 39 670 56 814 99 969 55 3°135 07	*805 64 *882 98 *969 19 \$\overline{2}\$*066 24 *174 86	149 67 258 03 375 59 503 39	85 86 87 88 89
90 91 92 93	'390 56 '237 89 '071 79 1'891 93 '695 53	2.864 93 .687 46 .496 90 .292 25 .071 98	'705 37 '569 71 '422 64 '254 41 '074 65	357 78 206 99 042 65 1864 45 669 57 458 83	762 11 928 21 2.108 07 304 47 516 68	312 54 503 10 707 75 928 02 2164 82	294 63 430 29 577 36 745 59 925 35	.793 o1 .957 35 2.135 55 .330 43	90 91 92 93 94
94 95 96 97 98	'483 32 '250 75 0'999 89 '723 21 '426 18	1.835 18 .579 66 .304 81 .007 62 0.689 34	0.868 14 .649 98 .396 22 .114 43	°227 55 °977 97 °7°2 33 °4°6 32	.749 25 1.000 11 .276 79 .573 82	'42° 34 '695 19 '992 38 1'31° 66 '653 2°	1.131 86 .350 02 .603 78 .885 57	772 45 1.022 03 297 67 593 68	95 96 97 98 99
99 100 101 102	114 43 1.772 71 394 01 2.906 17	346 80 1.964 17 .516 27 2.906 17	7.830 70 518 95 207 20 2.895 44	1.755 87 379 67	.885 57 0.227 29 .605 99 1.093 83	0.035 83	'481 05 '792 80 1'104 56	0.244 13	100 101

QM(5) VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x $2\frac{1}{2}$ PER CENT.

			α_x , α_x , α_x		., .,		12 CENT.
x	a_x	A_x	P_x	\overline{a}_x	$\overline{\mathbf{A}}_{x}$	$oxed{ar{\mathrm{P}}_x}$	x
10 11 12 13 14	26°259 26°082 25°900 25°713 25°521	33 514 33 947 34 391 34 847 35 317	'01 229 '01 253 '01 278 '01 305 '01 332	26.756 26.579 26.397 26.210 26.018	'33 932 '34 37° '34 819 '35 281 '35 755	°01 268 °01 293 °01 319 °01 346 °01 374	10 11 12 13 14
15 16 17 18 19	25'323 25'120 24'912 24'698 24'479	35 799 36 293 36 801 37 321 37 856	°01 360 °01 389 °01 420 °01 452 °01 486	25.820 25.617 25.409 25.195 24.976	'36 244 '36 745 '37 259 '37 787 '38 328	°01 404 °01 434 °01 466 °01 500 °01 535	15 16 17 18 19
20 21 22 23 24	24°255 24°024 23°788 23°546 23°298	'38 403 '38 965 '39 541 '40 132 '40 737	'01 521 '01 557 '01 595 '01 635 '01 677	24.752 24.521 24.285 24.043 23.795	38 881 39 451 40 034 40 632 41 244	°01 571 °01 609 °01 649 °01 690 °01 733	20 21 22 23 24
25 26 27 28 29	23.044 22.783 22.517 22.245 21.967	41 357 41 990 42 639 43 304 43 983	'01 720 '01 766 '01 813 '01 863 '01 915	23.541 23.280 23.014 22.742 22.464	'41 871 '42 516 '43 172 '43 844 '44 531	'01 779 '01 826 '01 876 '01 928 '01 982	25 26 27 28 29
30 31 32 33 34	21.683 21.392 21.095 20.792 20.482	'41 678 '45 386 '46 109 '46 850 '47 604	°01 970 °02 027 °02 087 °02 150 °02 216	22'180 21'592 21'289 20'979	'45 232 '45 950 '46 684 '47 432 '48 197	.'02 039 '02 099 '02 162 '02 228 '02 297	30 31 32 33 34
35 36 37 38 39	20°167 19°846 19°518 19°185 18°846	'48 372 '49 156 '49 955 '50 767 '51 594	°02 285 °02 358 °02 435 °02 515 °02 600	20.664 20.343 20.015 19.682	'48 975 '49 768 '50 578 '51 400 '52 237	°02 370 °02 446 °02 527 °02 612 °02 701	35 36 37 38 39
40 41 42 43 44	18.502 18.152 17.796 17.436 17.070	52 434 53 289 54 155 55 935 55 927	°02 689 °02 782 °02 881 °02 985 °03 095	18.999 18.649 18.293 17.933	'53 087 '53 951 '54 830 '55 719 '56 622	°02 794 °02 893 °02 997 °03 107 °03 223	40 41 42 43 44
45 46 47 48 49	16.700 16.325 15.946 15.564 15.177	56 829 57 742 58 666 59 602 60 544	°03 211 °03 333 °03 462 °03 598 °03 742	17'197 16'822 16'443 16'061 15'674	57 536 58 462 59 398 60 341 61 297	°03 346 °03 475 °03 612 °03 757 °03 911	45 46 47 48 49
50 51 52 53 54	14.788 14.395 14.000 13.603 13.204	'61 492 '62 451 '63 413 '64 383 '65 357	'03 895 '04 057 '04 228 '04 409 '04 601	15'285 14'892 14'497 14'099 13'700	'62 257 '63 228 '64 203 '65 186 '66 171	'04 073 '04 246 '04 429 '04 623 '04 830	50 51 52 53 54

 $O^{M(5)}$

VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x $2\frac{1}{2}$ per cont.

	1	1	7	1	1	1	1
x	α_x	A_x	P_x	\bar{a}_x	$\overline{\mathbf{A}}_x$	$-\overline{P}_x$	x
55 56 57 58 59	12'804 12'404 12'003 11'602	66 332 67 307 68 286 69 263 70 238	°04 805 °05 022 °05 252 °05 496 °05 756	12.499 12.499 13.300	.67 159 .68 147 .69 137 .70 127 .71 115	°05 050 °05 283 °05 531 °05 797 °06 079	55 56 57 58 59
60 61 62 63 64	10.804 10.407 10.013 9.622 9.234	71 210 72 179 73 139 74 095 75 040	°06 033 °06 328 °06 641 °06 976 °07 333	11.300 10.508 10.112 9.729	72 097 73 080 74 053 75 018 75 978	°06 380 °06 703 °07 047 °07 415 °07 810	60 61 62 63 64
65 66 67 68 69	8.850 8.471 8.097 7.729 7.367	75 977 76 901 77 811 78 710 79 594	°07 713 °08 120 °08 554 °09 017 °09 513	9°344 8°965 8°591 8°222 7°860	•76 926 •77 863 •78 787 •79 697 •80 592	08 232 08 685 09 171 09 693	65 66 67 68 69
70	7.011	'80 460	10 043	7.504	81 470	°10 857	70
71	6.663	'81 309	10 610	7.156	82 331	°11 506	71
72	6.323	'82 139	11 217	6.814	83 173	°12 206	72
73	5.990	'82 951	11 867	6.482	83 995	°12 959	73
74	5.666	'83 739	12 562	6.157	84 797	°13 772	74
75	5°351	·84 508	13 306	5.841	·85 576	14 650	75
76	5°045	·85 257	14 103	5.535	·86 333	15 599	76
77	4°749	·85 979	14 957	5.237	·87 068	16 625	77
78	4°462	·86 678	15 870	4.950	·87 778	17 734	78
79	4°185	·87 353	16 848	4.672	·88 464	18 935	79
80	3.918	·88 004	°17 894	4°404	·89 125	'20 237	80
81	3.662	·88 630	°19 012	4°147	·89 760	'21 646	81
82	3.416	·89 230	°20 208	3°899	·90 371	'23 176	82
83	3.180	·89 807	°21 486	3°662	·90 957	'24 836	83
84	2.954	·90 355	°22 851	3°425	·91 518	'26 641	84
85	2.739	'90 880	°24 306	3°218	'92 053	'28 601	85
86	2.534	'91 378	°25 854	3°012	'92 562	'30 728	86
87	2.340	'91 854	°27 504	2°816	'93 047	'33 046	87
88	2.155	'92 304	°29 252	2°630	'93 507	'35 559	88
89	1.981	'92 730	°31 106	2°453	'93 943	'38 297	89
90	1.816	'93 132	*33 °77	2°285	'94 357	*41 293	90
91	1.661	'93 510	*35 136	2°128	'94 745	*44 521	91
92	1.514	'93 869	*37 342	1°978	'95 117	*48 095	92
93	1.379	'94 198	*39 59°	1°840	'95 456	*51 876	93
94	1.248	'94 517	*42 °39	1°706	'95 788	*56 154	94
95	1°133	°94 798	°44 452	1.586	°96 083	.60 574	95
96	1°018	°95 078	°47 115	1.467	°96 376	.65 674	96
97	'925	°95 306	°49 512	1.370	°96 617	.70 523	97
98	'833	°95 530	°52 117	1.273	°96 857	.76 085	98
99	'708	°95 832	°56 123	1.142	°97 180	.85 081	99
100	°554	.96 197	.61 901	°983	.97 573	'99 280	100
101	°325	.96 752	.43 013	°748	.98 154	1'31 310	101
102	°000	.97 561	.97 561	°415	.98 975	2'38 361	102

OM(5) LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x $2\frac{1}{2}$ per cent.

			1. (0,0, 11,0,			,	
a	$\log a_x$	$\log A_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathbf{A}}_x$	$\log \overline{P}_x$	x
10	1°435 51	7°525 22	2.089 71	1.427 42	7.530 61	2·103 19	10
11	°432 68	°530 80	.098 12	.424 54	*536 18	·111 63	11
12	°429 75	°536 45	.106 70	.421 55	*541 82	·120 24	12
13	°426 72	°542 17	.115 45	.418 47	*547 54	·129 08	13
14	°423 58	°547 98	.124 40	.415 27	*553 34	·138 05	14
15	'420 34	553 87	'133 53	'411 96	'559 24	147 27	15
16	'416 98	559 82	'142 84	'408 53	'565 20	156 67	16
17	'413 50	565 86	'152 36	'404 99	'571 23	166 25	17
18	'409 91	571 95	'162 04	'401 31	'577 34	176 03	18
19	'406 19	578 13	'171 94	'397 52	'583 52	186 00	19
20	*4°2 34	*584 37	*182 03	393 61	'589 74	196 12	20
21	*398 36	*590 68	*192 32	389 54	'596 06	206 53	21
22	*394 25	*597 05	*202 80	385 34	'602 43	217 09	22
23	*389 98	*603 49	*213 51	380 99	'608 87	227 89	23
24	*385 57	*609 99	*224 42	376 49	'615 36	238 87	24
25	'381 01	616 55	'235 54	'371 82	621 91	°250 08	25
26	'376 28	623 15	'246 87	'366 98	628 55	°261 57	26
27	'371 39	629 81	'258 42	'361 99	635 20	°273 21	27
28	'366 33	636 53	'270 20	'356 83	641 91	°285 08	28
29	'361 10	643 28	'282 18	'351 49	648 66	°297 17	29
30	'355 69	650 09	°294 40	'345 96	655 45	'309 48	30
31	'350 09	656 92	°306 83	'340 23	662 29	'322 05	31
32	'344 29	663 79	°319 50	'334 29	669 17	'334 88	32
33	'338 29	670 71	°332 42	'328 16	676 07	'347 92	33
34	'332 08	677 64	°345 56	'321 78	683 02	'361 24	34
35	'325 66	*684 59	358 93	°315 21	689 97	'374 77	35
36	'319 02	*691 58	372 56	°308 42	696 95	'388 53	36
37	'312 14	*698 58	386 44	°301 36	703 96	'402 61	37
38	'305 03	*705 58	400 55	°294 07	710 96	'416 89	38
39	'297 69	*712 60	414 91	°286 52	717 98	'431 46	39
40	*290 07	'719 61	'429 54	°278 73	'724 99	'446 26	40
41	*282 21	'726 64	'444 43	°270 66	'732 00	'461 35	41
42	*274 07	'733 64	'459 57	°262 28	'739 02	'476 73	42
43	*265 66	'740 64	'474 98	°253 65	'746 00	'492 36	43
44	*256 97	'747 62	'490 65	°244 70	'752 99	'508 29	44
45	'247 97	'754 57	'506 60	'235 45	'759 94	524 49	45
46	'238 68	'761 49	'522 81	'225 88	'766.87	540 99	46
47	'229 08	'768 39	'539 31	'215 98	'773 77	557 80	47
48	'219 15	'775 26	'556 11	'205 77	'780 61	574 84	48
49	'208 91	'782 07	'573 16	'195 18	'787 44	592 25	49
50	198 32	788 82	'590 50	184 27	'794 19	609 93	50
51	187 39	795 54	'608 15	172 95	'800 91	627 96	51
52	176 09	802 18	'626 09	161 28	'807 56	646 28	52
53	164 44	808 77	'644 33	149 19	'814 15	664 96	53
54	152 42	815 29	'662 87	136 72	'820 67	683 95	54

OM(5) LOGARITHMS OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x $2\frac{1}{2}$ DERT.

		11111111111	or tow, raw,	,		, – 10	4 CENT
x	$\log a_x$	$\log A_x$	$\log \mathrm{P}_x$	$\log ar{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
55	1°140 02	7.821 72	2.681 70	1°123 85	7.827 10	2 703 25	55
56	°127 23	.828 06	.700 83	°110 59	.833 45	722 86	56
57	°114 04	.834 33	.720 29	°096 88	.839 71	742 84	57
58	°100 45	.840 50	.740 05	°082 71	.845 89	763 17	58
59	°086 44	.846 57	.760 13	°068 11	.851 96	783 85	59
60	'072 02	*852 54	'780 52	°053 08	*857 92	.804 84	60
61	'057 17	*858 41	'801 24	°037 51	*863 80	.826 30	61
62	'041 90	*864 15	'822 25	°021 52	*869 54	.848 02	62
63	'026 19	:869 79	'843 60	°005 05	*875 17	.870 12	63
64	'010 04	*875 29	'865 25	0°988 05	*880 69	.892 64	64
65	°993 44	*880 68	'887 24	'97° 55	·886 07	'915 52	65
66	°976 39	*885 93	'909 54	'952 56	·891 33	'938 77	66
67	°958 89	*891 04	'932 15	'934 °3	·896 45	'962 42	67
68	°94° 95	*896 03	'955 08	'914 99	·901 44	'986 45	68
69	°922 55	*900 88	'978 33	'895 41	·906 29	T'010 89	69
70	'903 70	'905 58	7.001 88	.875 30	'911 00	°035 71	70
71	'884 41	'910 14	.025 73	.854 65	'915 56	°060 92	71
72	'864 66	'914 55	.049 89	.833 43	'919 98	°086 57	72
73	'844 49	'918 82	.074 33	.811 68	'924 25	°112 57	73
74	'823 88	'922 93	.099 05	.789 38	'928 38	°139 00	74
75	*802 86	926 90	124 04	'766 52	'932 35	'165 84	75
76	*781 41	930 73	149 32	'743 09	'936 18	'193 10	76
77	*759 56	934 39	174 83	. '719 10	'939 86	'220 76	77
78	*737 34	937 91	200 57	'694 59	'943 39	'248 81	78
79	*714 74	941 28	226 54	'669 49	'946 77	'277 27	79
80	'691 80	'944 50	'252 70	.643 86	950 00	"306 15	80
81	'668 55	'947 58	'279 03	.617 71	953 08	"335 38	81
82	'644 99	'950 51	'305 52	.591 00	956 03	"365 04	82
83	'621 16	'953 31	'332 15.	.563 75	958 84	"395 08	83
84	'597 95	'955 95	'358 90	.535 95	961 51	"425 55	84
85	'572 75	'958 47	'385 72	*507 65	*964 04	'456 38	85
86	'548 31	'960 84	'412 53	*478 90	*966 43	'487 53	86
87	'523 70	'963 10	'439 40	*449 59	*968 70	'519 12	87
88	'499 06	'965 22	'466 16	*419 89	*970 84	'550 95	88
89	'474 37	'967 22	'492 85	*389 70	•972 86	'583 16	89
90	'449 57	'969 10	519 53	'358 91	'974 77	'615 88	90
91	'425 11	'970 86	545 75	'327 99	'976 56	'648 56	91
92	'400 32	'972 52	572 20	'296 16	'978 26	'682 10	92
93	'376 45	'974 04	597 59	'264 84	'979 80	'714 97	93
94	'351 86	'975 51	623 65	'231 93	'981 31	'749 38	94
95 96 97 98 99	'328 91 '304 92 '284 41 '263 16 '232 37	'976 80 '978 08 '979 12 '980 14 '981 51	.647 89 .673 16 .694 71 .716 98	°200 36 °166 58 °136 72 °104 83 °057 74	982 65 983 97 985 05 986 13	'782 29 '817 39 '848 33 '881 30 '929 83	95 96 97 98 99
100	'191 46	983 16	°791 70	7.992 47	*989 33	'996 86	100
101	'122 26	985 66	°863 40	.873 61	*991 91	0'118 30	101
102	'000 00	989 27	°989 27	.618 29	*995 53	'377 23	102

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}_{\bar{2}}^{\text{PER}}_{\text{CENT.}}$

D	IO	II	12	13	14	15	16	17	18	19	
Dura- tion.	26.259	26.082	25.900	25.713	25.521	25.323	25.120	24:912	24.698	24:479	Dura- tion.
0	,000	.000	.000	.000	*000	.000	.000	,000	,000	.000	0
1	.970	.970	.970	.970	'970	'969	.060	•969	.969	.969	1
2	1.010	1.010	1.010	1.010	1.909	1.000	1.909	1.909	1,000	1,000	2
3	2.821	2.821	2.821	2.821	2.821	2.820	2.820	2.820	2.820	2.819	3
4	3.705	3.402	3.705	3.404	3.404	3.704	3.403	3.403	3.405	3.702	4
5	4.262	4.261	4.201	4.261	4.260	4.260	4.559	4.228	4.228	4.557	5
6	5'393	5.392	5.391	2,301	5.390		5.389	2.388	5.384	5.386	6
8	6.108	6.197	6.196	6.196	6.195	6.193	6.192	6.191	6.190	6.188	7
9	6.979	6.978	6.977	6.975	6.974	6.973	6.971	6.970	6.968	6.966	8
	7.735	7.734	7.733	7.731	7.730		7.726	7.724	7.722	7.720	9
10	8.469	8.467	8.466	8.464	8.462		8.458	8.455	8.452	8.449	10
$\begin{vmatrix} 1\\2 \end{vmatrix}$	9.180	9.178	9.176	9.174	9'171		9,166	9.163	9,160	9.126	1
3	9.869	9.866	10.231	10.28	9.859	9.856	9.852	9.849	9.845	9.840	2
4	11.184	11,180	11.122	11.174	11.140	11.199	10.214	11,126	10.208	10.203	3
15		11.807							11,120	11.144	4
6	11.811		11.803	11.799	11.795	11.790	11.784	11.778	11.772	11.765	15
7	12.418	12,414	12.410	12,402	12.400	12.394	12.388	12.381	12.374	12.366	6
8	13.577	13.002	13.266	13.200	13.253	12.979	13.238	12.964	12.956	12.247	7 8
9	14'129	14.153	14'117	14,110	14°102	14.094	14.085	14.075	14.064	13.209	9
20	14.664	14.657	14.650	14.642	14.634	14.624		, , ,			_
1	15.185	15.174	15.166	15.128		15.138	14.614	14.603	14.201	14.578	20
2	15.683	15.675	15.666			15.634	15.621	15.607	15.200	15.24	1 2
3	16.168	16.120	16.149		16.152	16.114	19,100	16.082	16.068	16.020	3
4	16.638	16.628	16.617	16.602	16.592	16.218	16.265	16.242	16.22	16.202	4
25	17.093	17.081	17.070	17.057	17.042	17.026	17.000	16,001	16.970	16.948	25
6	17.532	17.20	17.207	17'493	17.477	17.460	17.441	17°420	17.398	17.374	6
7	17.958	17'944	17.930	17'914	17.897	17.878	17.857	17.835	17.811	17.784	7
8	18.369	18.354	18.339	18.321	18.302	18.282	18.259	18.235	18.208	18.179	8
9	18.767	18.751	18.733	18.715	18.694	18.671	18.647	18.620	18.291	18.559	9
30	19.121	19.133	19,112	19.094	19.072	19.047	19.021	18.991	18.960	18.925	30
1	19.225	19.203	19.483	19.461	19.436	19°409	19.380	19.349	19.315	19.277	1
2	19.880	19.860	19.838	19.814	19'787	19.758	19'727	19.693	19.656	19.612	2
3	20.550	20'204	20.180	20'154	20.152	20.094	20.060	20.053	19.983	19.939	3
4	20.200	20.236	20.210	20'482	20°451	20°417	20,381	20,341	20,508	20,520	4
35	20.885	20.856	20.858	20.798	20.765	20.428	20.689	20.046	20.299	20.248	35
6	21,103	21,162	21'135	21:102	21.066	21.027	20'984	20,038	20.888	20.833	6
8	21.492	21.462	21,420	21.394	21.355	21.313	21,264	21'217	21.164	21,102	7
9	21.779	21.747	21.412	21.044	21.633	21.288	21.239	21°485	21.427	21.364	8 9
				21.944			21.798		21.679	21.012	
40	22.323	22.282	22'245	22'202	22'154	22'102		21.082	21.010	21.847	40
2	22.824	22.238	22.496	22.449	22.621	22.342	22.282	22.438	22.146	22.020	1 2
3	53.020	23.014	22.964	22.011	22.831	22.2790	22.207	22.647	22.363	22.481	3
4	23.584	23.536	23.183	23.152	23.062	22.997	22.025	22.846	22.761	22.669	4
45	23.200		23.392	23.332	23.566	23.104	23.112	23.033	22'943	22.846	45
6	23.400		23,201	23.527	23.457	53.381	53.599	53,510	53.112	23.015	6
7	23.902	23.844	23.780	23'712	23.638	23.557	23.471	23.377	23.526	23.167	7
8	24.089	24.027	23.060	23.888	23.809	23.724	23.632	23.232	23'426	23.311	8
9	24.564	24.501	24.130	24.023	23.970	23.880	23.483	23.678	23.266	23'445	9
	IO	II	12	13	T.4	75	16	17	18	TO	
		**	12	-3	14	15	10	-/	10	19	

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

Dura-	20	21	22	23	24	25	26	27	28	29	Dura-
tion.	24:255	24:024	23.788	23.546	23.298	23.044	22.783	22.517	22.245	21.967	tion.
0	*000	,000	.000	,000	.000	.000	.000	.000	.000	,000	0
1	•969	•969	•969	1,008	1.008	1,008	'969 1'907	1,969	1,002	1,006	$\frac{1}{2}$
$\begin{vmatrix} 2 \\ 3 \end{vmatrix}$	1,000	2.810	1.908	2.818	2.817	2.817	2.819	2.816	2.812	2.814	3
4	3.401	3.401	3.400	3.699	3.698	3.697	3.697	3.696	3.694	3.693	4
5	4.256	4.555	4.554	4.553	4.552	4.550	4°549	4.547	4.246	4°544	5
6	5.384	5.383	5°382	5.380	5.348	5.376	5°374	5.372	5'370	5'367	6
7	6.184	6.182	6.183	6.181	6.178	6°176	6.173	6.170	6.164 6.38	6.163	7 8
8	6.964 7.717	6.962 7.714	6°959 7°711	6.956 7.707	7.703	7.699	7.695	7.690	7.684	7.678	9
10	8.446	8.442	8.438	8.434	8.429	8.424	8.418	8.412	8.405	8.398	10
1	9.125	9'147	9'143	9.138	9,135	9.125	9.110	9,111	9.103	9.094	1
2	9.835	9.830	9.824	9.818	9.811	9.804	9.796	9.787	9'777	9.766	2
3 4	10.497	10'491	10.484	10.477	10,469	10'460	10.450	10°440	10.428	10'415	3 4
	11,138	11,130	11'122	11'114	11'104	11.094	11.693	11.679	11.663	11.646	15
15 6	11.757	11'749	11.740	11.730	11.418	11.406	12.583	12.267	12'249	12.229	6
7	12.937	12'925	12'914	12,000	12.886	12.870	12.853	12.834	12.814	12.791	7
8	13.497	13.485	13°471	13°456	13.440	13'422	13°403	13.385	13,328	13.333	8
9	14.039	14.052	14.010	13.993	13'974	13.954	13.933	13.000	13.883	13.854	9
20	14.263	14.547	14.230	14.211	14°490	14°468	14°443	14'417	14.387	14.356	20
1 2	15.060	15.238	12.035	15.011	14°988 15°468	14'963	14.936	14.906	14.873	15'301	2
3	16.030	16.008	15.984	15.493	15'930	15.899	15.862	15.829	15.489	15.745	3
4	16.485	16°461	16.434	16.406	16.375	16.340	16,303	16.563	16.510	16.141	4
25	16.924	16.897	16.868	16.837	16.803	16.765	16.724	16.680	16.635	16.579	25
6	17:347	17.318	17.286	17.252	17.214	17.173	17.128	17.080	17'027	16.970	6 7
8	17.754	18.113	17.688	17.650	17.609	17.564	17.886	17.463	17.405	17.342	8
9	18.24	18.487	18.446	18.401	18.325	18.599	18.241	18.179	18.111	18.037	9
30	18.887	18.846	18.802	18.753	18.700	18.642	18.280	18.213	18.439	18.359	30
1	19.536	19.191	19.143	19,001	19.033	18.971	18,003	18.830	18.751	18.665	1
2	19.571	19'522	19.470	19.413	19.351	19.284	10,211	19,133	19.327	18.954	3
3 4	19.891	19.839	19.783	19,722	19.655	19.582	19.504	19,419	19'592	19.486	4
35	20.492	20'432	20.364	20.506	20'219	20'135	20'045	19.948	19.842	19.728	35
6	20.432	20.708	20.638	20.292	20.480	20,300	20.294	20.100	20.077	19.955	6
7	21.041	20.971	20.896	20.815	20'727	20.631	20.238	20°417	20.297	20.168	7
8 9	21,238	21,422	21°141	21.024	50,060	20.858	20.749	20.630	20.203	20.365	8 9
40	21.768					21.575	1	1		20,218	40
1	21.986	21.896	21.799	21.694		21.459	21,358		21.036		1
2	22.192	22.097	21.994	21.885	21.762	21.633	21°495	31.346	21.184	21.014	2
3	22.386		22.176	_	21.931		21.649		21.325	21'147	3 4
4	22.269	22'462	22.346	22.222	22'088		21.791	21.626	21.421	21'264	
45	22.740	22.480	22.202	22.373	22.362		21.038	21.248	21.264	21.369	45
7	23.049	22,053		22.642	22.487	55.351	22.142	21.957	21.758		7
8	23.184	23.024	22.015	22.760	22.208	22.424	22'241	22.046	21.838	21.620	8
9	23,312	23.172	23.052	22.868	22.698	22.212	22.326	22.154	21,000	21.683	9
	20	21	22	23	24	25	26	27	28	29	
_	20	21	22	23	24	25	26	27	28	29	

 $\mathbf{O}^{\mathbf{M}(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

Dura-	30	31	32	33	34	35	36	37	38	39	Dura-
tion.	21.683	21:392	21.095	20.792	20.482	20.167	19.846	19.518	19.185	18.816	tion.
0	.000	,000	.000	.000	.000	.000	.000	•000	*000	,000	0
1	.968	'968	.968	.968	.968	'967	*967	'967	*967	'966	1
3	1,000	1,002	1,002	1'904	2.809	1 '903 2 '808	1.903	2.805	2.803	2.802	2
4	3.692	3.690	3.689	3.687	3.682	3.683	3.680	3.678	3.675	3.672	3 4
5	4.242	4°539	4.237	4'534	4.231	4.28	4.24	4.20	4.216	4.212	5
8	5.364	5.361	5.357	5.353	5.349	5°345	5'340	5.334	5.328	5.322	6
7	6.129	6.122	6.120	6.142	6,139	6.133	6.139	6.110	6.111	6.105	7
8 9	6.928	6.923	6.916	6.910	6.902	6.894	6.886	6.876	6.865	6.854	8
	7.672	7.665	7.657	7.648	7.639	7.629	7.618	7.606	7.592	7.578	9
10	9.084	8°381 9°074	8·372 9·062	8.361	8.350	8:337	8·324 9'004	8°309 8°985	8·292 8·966	8.275	10
2	9°754	9.742	9.728	9.049	9.696	9.678	9.658	9.636	9.613	8°944 9°588	$\frac{1}{2}$
3	10,401	10.386	10.370	10.325	10,335	10,311	10.288	10.5265	10,532	10'205	3
4	11.056	11,008	10.089	10.968	10.945	10.920	10.893	10.864	10.831	10.494	4
15	11.628	11.608	11.282	11.261	11.235	11.206	11.475	11°441	11.403	11'363	15
6	12.508	12.182	12.159	12.135	12'102	12.069	12.033	11.994	11.951	11.002	6
7	12.767	12.741	12.415	12.680	12.646	12.609	12.268	12.23	12.475	12°423	7
8 9	13.823	13.276	13.243	13'207	13,168	13,156	13.080	13.030	12.976	12.017	8
		13.790	13.753	13'714			13.240	13.214	13.453	13.388	9
20	14'321	14.757	14°242	14.198	14,149	14°549	14.039	13.976	13'908	13.835	20
2	15.528	15'212	12,161	15.109	15.046	14.981	14'911	14.834	14.751	14'662	$\frac{1}{2}$
3	15.698	15.647	15.201	15.230	15.464	12.393	12.312	15.531	15'140	15.042	3
4	19.119	16.063	16.001	15.935	15.862	15.784	15.699	15.607	15.204	15.400	4
25	16.22	16°460	16.393	16.320	16.241	16.122	16.062	15°962	15.853	15.737	25
6	16.907	16.840	16.766	16.684	16.600	16.204	16,409	16.594	16.179	16.025	6
7	17.274	17°201	17'121	17.034	16.041	16.839	16.730	16.611	16.484	16:5347	7
8 9	17.624	17.544	17.457	17.364	17.262	17.153	17.034	16.907	16.769	16.822	8
30	18.272	18.179	18.078	17.969	17.850	17.723	17.587	17.439	17.281	17'112	30
1	18.571	18.471	18.362	18.244	18,118	17.981	17.835	17.677	17.509	17:329	1
2	18.854	18.746	18.629	18.203	18.367	18.222	18.062	17.897	17.718	17.527	2
3	19,150	19'004	18.879	18.745	18.600	18.444	18.278	18,100	17'909	17'707	3
4	19.370	19.247	10,113	18.970	18.812	18.620	18.474	18.582	18.084	17.870	4
35	19.605	19.473	19.331	19'179	19.012	18.840	18.653	18.453	18.241	18,019	35
6 7	19.824	19.880	19.233	19.371	19.198	19,013	18.819	18.606	18.383	18°147 18°263	6
8	20,518	20.000	19.720	19.549	19.366	19'313	18.963	18.743 18.865	18.209	18.364	7 8
9	20,333	20'227	20.048	19.859	19.656	19,441	19'214	18.973	18.719	18.453	9
40	20.224	20.379	50,131	19.992	19.780	19.556	19.318	19.068	18.804	18.529	40
1	20.401	20.212	20,350	50,115	19.891	19.657	19.410	19,120	18.878	18.203	1
2	20.832	20.642	20.436	20'219	19.088	19'745	19'490	19.551	18.940	18.647	2
3 4	20.026	20.755	20.240	20.314	20.074	19.823	19.559	19.282	18.993	18.693	3
	21.062	20.855	20.632	20'397	20°149	19.889	19.617	19,335	19.036	18.729	4
45 6	21.162	20'944	20.712	20.469	20.213	19.946	19.666	19°374	19.072	18.759 18.782	45
7	21°324	51.080	20.843	20°531 20°584	20'314	19.993	19.707	19'409	19,101	18.800	6 7
8	21.389	21.148	20'894	20.629	20.325	20,062	19.767	19.458	19'141	18.814	8
9	21'446	21.194	20.937	20.666	20.383	20'091	19.788	19.475	19.124	18.824	9
	30	31	32	33	34	35	36	37	38	39	
	0-		3-	33	34	33	30	37	35	37	

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VALUES OF TEMPORARY ANNUITIES OF 1

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		40	41	42	43	44	45	46	47	48	49	
	Oura- tion.	18.502	18.152	17.796	17:436	17:070	16.700	16.325	15.946	15.564	15.177	Dura- tion.
-	0	,000	,000	,000	*000	.000	,000	'000	*000	*000	.000	0
ı	1	·966	•966	.965	*965	964		'963	*963	.962	.061	1
н	2	1.899	1.898	1.897	1.895	1.894	1.892	1.891	1.889	1.887	1.885	2
ı	3	2.800	2.797	2.795	2.792	2.790	2.786	2.483	2.779	2.775	2.771	3
ı	4	3.668	3.665	3.661	3.657	3.652	3.646	3.641	3.635	3.628	3.620	4
Н	5	4.204	4,201	4.495	4.488	4.481	4.473	4°465	4°455	4°445	4°434	5
П	6	5.314	5.307	6.071	5°289 6°058	5°279 6°045	5°267 6°030	5°255 6°014	5'242	5.558	5°212	6
ı	7 8	6.842	6.828	6.813	6.797	6.42	6.760	6.740	6.414 9.66	5°977 6°692	5.956	8
ı	9	7.262	7.546	7.527	7.506	7.484		7.434	7.405	7:374	7.340	9
н	10	8.255	8.234	8.211	8.186	8.159	8.139	8.097	8.062	8.024	7.983	10
ı	1	8.921	8.896	8.868	8.838	8.805	8.769	8.730	8.688	8.642	8.592	1
ı	2	9.260	9.230	9°496	9.460	9.421	9°379	9'333	9.585	9.228	9.169	2
ı	3	10'172	10.134	10.092	10.022	10,010	9.960	9.006	9.847	9.784	9.712	3
П	4	10.758	10.414	10.672	10.653	10.240		10.450	10,385	10,300	10,550	4
ı	15	11,310	11.272	11.550	11°164	11,103	11.036	10.962	10.884	10.803	10'713	15
н	6 7	11.855	11.801	11'741	11.678	11.608	11.233	11,42	11.363	11,269	11,280	6 7
ı	8	12.853	12.784	12.709	12.627	12'540	12.444	12.345	12,531	15,115	11.984	8
п	9	13.316	13.539	13.124	13.064	12.966	12.860	12.746	12.623	12,492	12,320	9
1	20	13.755	13.670	13.576	13.476	13.367	13'250	13'124	12.088	12.844	12.688	20
п	1	14.171	14.077	13'973	13.863	13.743	13.614	13'476	13.327	13.160	12.998	1
ш	2	14.262	14.460	14.347	14.222	14.092	13,023	13.803	13.040	13.468	13.583	2
н	3	14.935	14.821	14.697	14.264	14.422	14'268	14.104	13.928	13.741	13.241	3
ı	4	15.584	12.120	15.024	14.880	14.725	14.259	14.381	14.191	13.990	13.775	4
ı	25 6	12,019	15.475	15.239	15.173	15.002	14.826	14.866	14.648	14.215	13.986	25
ł	7	16,500	16.045	15.873	15.692	15.499	15.593	15.075	14.842	14.598	14'173	7
ı	8	16.464	16.592	16.113	15.920	15.714		15.565	15.019	14.758	14.485	8
ı	9	16.404	16.226	16.335	16'127	15.908	15.675	15.430	15.140	14.898	14.612	9
ı	30	16.931	16.739	16.232		16.085	15.836	15.248	15.302	15.020	14.721	30
П	1	17.136	16.932	16.713	16.482	16.238	15'979	15.708	15.422	15.152	14.814	1
П	3	17'323	17.100	16.875	16.432	16'376	16'104	15.821	15.23	15.514	14.892	2
ı	4	17.643	17.403	17.149	16.885	16.602	16.307	12.018	15.682	15.321	14.956	3 4
п	35	17.778	17.527	17.261	16.983	16.692	16.387	16.041	15'741	15.402	15.025	
н	6	17.898	17.636	17.359	17.071		16.454	16.158	15.40	15'443	15.082	35 6
	7	18.003	17.730	17.443	17.145	16.834	16.210	16.172	15.830	15.475	12.111	7
	8	18.094	17.812	17.212	17.207	16.887	16.555	16.513	15.861	15.200	12.131	8
1	9	18.173	17.881	17.575	17.259		16.292	16.243	15.882	12.219	15.146	9
	40	18.240		17.625	17:301	16.966		16.267	15.003	15.233	15.126	40
	2	18.342	17.987	17.666	17.335	16.994	16.660	16.584	15.917	15.244	12,164	1 2
	3	18.381	18.024	17.725	17.383	17.032	16.673	16.307	15.934	12.221	15.145	3
	4	18.411	18.083	17.745	17.399	17.044	16.682	16.313	15.938	15.220	15.14	4
1	45	18.435	18.103	17.760	17.410	17.053	16.688	16.318	15.941	15.261	15.176	45
	6	18'454	18.118	17.772	17.419	17.059	16.692	16.321	15.943		15.176	6
	7 8		18.129	17.780	17.425	17.063	16.695	16.323			15.177	7
		18.479 18.487	18.136	17.789	17.429	17.066	16.698	16.324	15.045		15.177	8 9
1									15.046		15.177	
-		40	41	42	43	44	45	46	47	48	49	
-				THE PER	-			-				

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}_{\bar{2}}^{\text{PER}}_{\text{CENT.}}$

Dura-	50	51	52	53	54	55	56	57	58	59	Dura-
tion.	14.788	14.395	14.000	13.603	13.204	12.804	12.404	12.003	11.602	11.202	tion.
0	.000	,000	*000	.000	,000	,000	.000	.000	.000	'000	0
1	.001	.060	'959	.958	957	955	954	952	951	949	1
2	1.885	2.461	1.877	1.874	2.742	1.867	2.726	1.858	2.708	1.848	3
3 4	3.612	3.604	2°755 3°594	3.283 3.283	3.272	2°735 3°560	3.246	3.231	3°515	2:697 3'498	4
5	4'422	4.409	4°394	4.378	4.362	4.343	4'323	4'301	4°277	4.251	5
6	5.192	5'177	5.124	5'134	2,111	5.082	5.057	5'026	4.993	4.957	6
7	5.933	5.908	5.881	5.852	5.820	5.786	5.748	5.708	5.664	5.616	7
8	6.636	6.604	6.269	6.231	6.491	6.447	6.399	6:347	6.291	6.230	8
9	7.304	7.264	7.220	7.173	7.123	7.068	7.008	6.944	6.874	6.800	9
10	7'938	7.889	7.836	7.779	7'717	7.650	7:578	7.200	7.416	7.326	10
1	8.238	8.480	8.416	8.348	8.274	8.194	8,100	8.019	7.916	7.810	1
2	9,100	9°037	8.962	8.881	8.795	8.701	8.601	8.492	8.376	8.253	2
3	9'641	9.261	9.473	9.380	9.280		9.055	8.931	8.797	8.656	3
4	10'144	10,021	9,921	9'844	9'729	9,606	9°473 9°856	9°332	9,180	9.020	14
15	11.026	10.210	10,800	10.572	10.142	10.370	10.204	9.696	9°527 9°838	9°348	15
7	11.466	11,333	11,131	11,038	10.876	10,403	10.218	10,353	10.119	9.898	7
8	11.847	11,699	11.241	11.373	11.194	11,003	10.801	10.284	10.362	10,152	8
9	12.198	12.036	11.862	11.677	11.482	11.274	11.024	10,851	10.277	10'322	9
20	12.21	12°344	12'154	11.953	11.740	11.212	11.277	11'027	10.765	10'492	20
1	12.817	12.624	12.418	12°200	11.971	11.428	11.473	11.500	10.036	10.637	1
2	13.086	12.877	12.655	12,421	12'175	11.012	11.643	11.329	11.064	10.428	2
3	13,330	13,102	12.867	12.616	12.324	12.078	11.790	11,490	11.120	10.829	3
4	13.248	13.308	13.022	12.788	12,210	12.518	11.912	11,000	11.572	10'941	4
25	13.744	13.488	13.510	12.937	12.644	12.337	12.020	11.691	11,323	11.007	25
6	13.016	13.646	13'362	13.062	12.758	12.438	12'107	11.766	11'416	11,000	6 7
7 8	14.068	13.483	13.485	13.175	12.854	12.289	12.178	11.873	11.466	11,131	8
9	14'313	14'002	13.678	13.343	15,998	12.643	15,580	11,010	11.234	11.124	9
30	14°410	14°086	13.751	13°405	13.020	12.686	12.315	11.938	11.222	11.140	30
1	14°491	14'156	13.810	13.455	13.092	12'720	12.342	11.958	11.271	11,185	1
2	14.558	14.514	13.828	13'494	13'124	12.745	12.361	11.973	11.285	11,100	2
3	14.613	14.260	13.896	13.25	13.148	12.764	12.376	11.084	11,200	11,102	3
4	14.657	14.296	13.026	13.248	13,199	12.778	12.386	11,001	11,202	11,108	4
35	14.692	14°324	13.948	13.262	13.179	12'787	12.393	11,000	11.298	11.300	35
6	14'719	14'345	13'964	13.228	13.188	12'794	12'397	11,000	11,000	11.301	6 7
8	14.740	14.361	13.976	13.287	13,194	12.298	12.400	12'000	11.601	11.202	8
9	14 755	14.373	13,000	13.593	13,501	12.801	12'402	12'002	11.602	11,505	9
40	14.774	14.386	13.994	13.299	13.503	12.803	12'403	12.003	11.605	11,505	40
1	14'779			13.601	13°203	12.804	12.404	12,003	11.605	11,505	1
2	14.783	14°392	13.998	13.602		12.804	12.404	12.003	11.602	11°202	2
3	14.785		13.999	13.605	13.504	12.804	12.404	12'003	11.602	11'202	3
4	14.786	14.395	14.000	13.605	13.504	12.804	12.404	12,003	11.005	59	
45	14'787	14.392	14.000	13.605		12.804	12°404	12,003	58	50	
8	14.787	14'395	14.000	13.603	13°204	12.804	12,404	57	51	50	
7 8	14.787	14.395	14,000	13.603	13'204	12.804		52		14:788	
9	14 788	14.395	14'000	13.603	13.504				14:395	14.788	52
	4 /00	7 373	7 303	3 303				14.000	14.395	14'788	1
								14.000	14°395	14.788	50
	50	51	52	53	54	55	56	52	51	50	
-											

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}$ PER CENT.

Dura-	60	61	62	63	64	65	66	67	68	69	Dura-
tion.	10.804	10.407	10.013	9.622	9.234	8.850	8.471	8:097	7.729	7.367	tion.
0	,000	*000	000°	*000	000°	*000	000	*000	.000	000°	0
1	'947	945	'943	940	*937	*934	.031	.928	924	920	1
2	1.842	1.836	1.829	1.822	1.813	1.804	1.795	1.785	1.773	1'761	2
3	2.686	2.673	2.660	2.645	2.629	2'612	2.233	2°572	2.220	2,256	3 4
4	3.479	3°459 4°192	3°436 4°159	3'412	3°386 4°085	3°357 4°043	3°327 3°998	3°293 3°949	3°257 3°897	3.841	
5 6	4.223	4.876	4.830	4.781	4'727	4.670	4.609	4.543	4.472	4.396	6
7	5.262	5.209	5'449	5.382	2,312	5.241	2,191	5.076	4.985	4.888	7
8	6.162	6.092	6.019	5.938	5.821	5.757	5.658	5°552	5.439	5.319	8
9	6.419	6.633	6.240	6.441	6.332	6.551	6,101	5.973	5.837	5.694	9
10	7.229	7°126	7'014	6.896	6.769	6.635	6.493	6.342	6.183	6.019	10
1	7.695	7°574	7.443	7.302	7°157	7.001	6.837	6.663	6.481	6.591	1
2	8.130	7.979	7.829	7.670	7.201	7.323	7.136	6.940	6.735	6.222	2
3	8.204	8.343	8.173	7.993	7.802	7.602	7'393	7.175	6.948	6.713	3
4	8.849	8.668	8.477	8:276	8.064	7.843	7.613	7°373	7.125	6.869	4
15	9°157	8.956 9.208	8·744 8·977	8·522 8·734	8°290 8°482	8.048	7°797 7°949	7.537	7.269	6°995	15
6	9'429	9.428	9.176	8.915	8.643	8.362	8.074	7.779	7.477	7°172	7
8	9.876	9.617	9.346	9.066	8.777	8.479	8.174	7.864	7.548	7.230	8
9	10.022	9.778	9.489	9,195	8.886	8.573	8.254	7.930	7.602	7'273	9
20	10.502	9'913	9.608	9'295	8.974	8.647	8.312	7.980	7.642	7.305	20
1	10.332	10.025	9.705	9.378	9.043	8.704	8.362	8.017	7.671	7.327	1
2	10'441	10.119	9.783	9°443	9.097	8.748	8.396	8.044	7.692	7.342	2
3	10.28	10,100	9.844	9°493	9,138	8.780	8.421	8.063	7.706	7.352	3
4	10.208	10.548	9.892	9.233	9,168	8.803	8.439	8.076	7.715	7.358	4
25	10.623	10°293	9.928	9.260	9,190	8.820	8.451	8.084	7.721	7.362	25
6	10.695	10.327	9.955	9.281	9.206	8.831	8.459	8.000	7'724	7.364	6
7	10.728	10.323	9°974	9.595	9,519	8.838	8°464 8°467	8.093	7.726	7.365	7
8 9	10.752	10.321	9'988	9.612	9.223	8.843	8.469	8.099	7.727	7.366	8 9
30	10.481	10,393	10.004	9.616	9.230	8.848	8.470	8.096	7.728	7.367	30
1	10.400	10,388	10.004	9.619	9°232	8.849	8.470	8.092	7.729	7.367	1
2	10.795	10'402	10.010	9.620	9'233	8.849	8.471	8.097	7.729	7.367	2
3	10.499	10.404	10.011	9.621	9.233	8.849	8.471	8.097	7.729	7.367	3
4	10.801	10°406	10.013	9.621	9°233	8.820	8.471	8.097	7.729	69	
35	10.803	10'407	10.013	9.622	9°234	8.820	8.471	8.097	68	40	
6	10.803	10°407	10,013	9.622	9°234	8.850	8.471	67	4.T	40	
7	10.803	10°407	10,013	9'622	9°234	8.850	66	12	41	18.502	
8 9	10.803	10.407	10,013	9.622	9°234	65	43	42	18.152	18.202	62
40	10.804	10'407	10.013	63	64	44		17.796	18.12	18.205	1
1	10.804	10'407	62		45		17:436	17.796	18.12	18.205	60
2	10.804	61		46		17.070	17.436		18.12	18.202	59
	60		47	16.325	16.700	17.070	17.436	17.796	18.12	18.202	8
	====	48	15.946		16.400	17.070	17.436		18.12	18.201	7
	49	15.564		16.325	16.700	17.070	17.436			18.201	6
	15.177		15.046	16.322	16.400	17.070	17.436	17.796	18.125	18.201	5
53	15.177	15.264	15.946	16.322	16.700	17.070	17.436	17.796	18.121	18.200	54
2	15.177	15.264	15'946	16.322	16.699	17.070	17.435	17.795	18.120	18.498	2
1	15.177	15.264	15.946	16.352	16.699	17.070	17.434	17.794	18.148	18.496	1
50	15.177	15.264	15.946	16.322	16.699	17.069	17.433	17.792	18.146	18.492	50
	49	48	47	46	45	44	43	42	41	40	
	1 77	40	77		73	1 77	73	7-	7*	70	1

 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

21 PER 2 CENT.

Duration. 0 1 2 3 4 5 6 7 8 9 10 1	70 7·011 ·000 ·915 1·747 2·501 3·177 3·781 4·315 4·784 5·192 5·543	71 6.663 '000 '910 1.733 2.473 3.132 3.716 4.229 4.675	72 6·323 ·000 ·904 1·717 2·442 3·084 3·648 4·137	73 5.990 .000 .899 1.700 2.410 3.033 3.574	74 5.666 .000 .892 1.682 2.375 2.978	75 5·351 ·000 ·885 1·662 2·338	76 5·015 ·000 ·878	77 4·749 ·000 ·869	78 4·462 ·000 ·861	79 4·185	Dura- tion.
0 1 2 3 4 5 6 7 8 9	'000 '915 1'747 2'501 3'177 3'781 4'315 4'784 5'192 5'543	'000 '910 1'733 2'473 3'132 3'716 4'229 4'675	°000 °904 1°717 2°442 3°084 3°648	°000 °899 1°700 2°410 3°933	°000 °892 1°682 2°375	°000 °885 1°662	.000 .878	.000	.000		
1 2 3 4 5 6 7 8 9	'915 1'747 2'501 3'177 3'781 4'315 4'784 5'192 5'543	'910 1'733 2'473 3'132 3'716 4'229 4'675	'904 1'717 2'442 3'084 3'648	.899 1.700 2.410 3.033	.892 1.682 2.375	·885	.878			.000	-
2 3 4 5 6 7 8 9	1'747 2'501 3'177 3'781 4'315 4'784 5'192 5'543	1.733 2.473 3.132 3.716 4.229 4.675	1.717 2.442 3.084 3.648	1.410 2.410 3.033	1.682 2.375	1.665		.860	.06.		0
3 4 5 6 7 8 9	1'747 2'501 3'177 3'781 4'315 4'784 5'192 5'543	2'473 3'132 3'716 4'229 4'675	2°442 3°084 3°648	1.410 2.410 3.033	2.375				001	'851	1
4 5 6 7 8 9	2.501 3.177 3.781 4.315 4.784 5.192 5.543	2'473 3'132 3'716 4'229 4'675	3.084	2°410 3°033		2:228	1.641	1.918	1.203	1.266	2
4 5 6 7 8 9	3°177 3°781 4°315 4°784 5°192 5°543	3°132 3°716 4°229 4°675	3.084	3.033		2 330	2.297	2.254	2.208	2,120	3
6 7 8 9 10	3°781 4°315 4°784 5°192 5°543	3.716 4.229 4.675	3.648			2'919	2.856	2.789	2.719	2.644	4
6 7 8 9 10	4°315 4°784 5°192 5°543	4.229 4.675			3.496	3.413	3.326	3.533	3.136	3°034	5
7 8 9 10	4°784 5°192 5°543	4.675		4.040	3.937	3.829	3.715	3.296	3.471	3'341	6
8 9 10	5°192 5°543		4.559	4'437	4.308	4.1.74	4.033	3.887	3.736	3.280	7
9	5.543	5.028	4'917	4.770	4.616	4.455	4.289	4.118	3,041	3'761	8
10		5.384	2,510	5.046	4.867	4.682	4.491	4.596	4.097	3.895	9
						4.861				-	10
1	5.841	5.886	5.469	5.272	5.069		4.648	4.432	4'213	3'993	1
0	6'092		5.673	5.454	5.550	5.000	4.767	4.532	4.296	4.001	2
2	6.300	6:072	5.837	5.597	5.353	5.102	4.855	4.605	4.355	4'107	_
3	6.471	6.222	5.967	5.408	5.447	5.183	4'919	. 4.656	4.395	4°138	3
4	6.607	6.340	6.068	5'793	5.216	5'239	4.964	4.691	4.422	4.128	4
15	6.412	6.431	6.144	5.855	5.267	5'279	4'994	4.414	4.439	4°170	15
6	6.799	6.201	6.301	2,000	5.602	5.306	5.012	4.728	4.449	4'177	6
7	6.863	6.22	6.541	5'932	5.626	5.354	5.027	4.737	4.455	4,181	7
8	6.910	6.289	6.270	5'954	5.642	5.336	5.032	4.743	4.458	4.183	8
9	6.944	6.616	6.500	5.968	5.652	5.343	5.040	4.746	4.460	4°184	9
20	6'968	6.633	6.303	5.978	5.659	5'347	5.043	4.747	4.461	4°184	20
1	6'984	6.645	6.311	5.983	5.662	5'349	5.044	4.748	4'462	4.182	1
2	6.992	6.653	6.319	5.986	5.664	5.350	5.045	4.748	4'462	4.182	2
3	7.002	6.657	6.319	5.988	5.662	5.32 I	5.045	4.749	4'462	4.182	3
4	7.006	6.660	6.351	5.989	5.666	5.321	5.042	4.749	4.462	79	
25	7.008	6.662	6.322	5.990	5.666	5.321	5.045	4.749	78		
6	7'010	6.662	6.322	5.990	5.666	5.321	5.045	77		30	
7	7.011	6.663	6.322	5.990	5.666	5.351	76		31	21.683	
8	7.011	6.663	6.322	5.990	5.666	75		32	21:392		
9	7.011	6.663	6.322	5.990	74		33	21.095	41 0:12	21.683	72
30	7.011	6.663	6.323	73		34	90.709		21,305	21.683	1
1	7.011	6.663	72		35	20.482	20.792	21.002	21,335	51.685	70
2	7.011	71		36	20.167	-	20'792	21.002	21,305	21.685	69
	70		37	19.846	-	20.482	20.792	21.002	21,305	51.685	8
		38	19.518	-	20.164	20.482	20.792	21.002	21,395	21.685	7
	39	10.105	Commission of the last of the	19.846	20.164	20.482	20.792	21.002	21,305	21.685	6
	10,010	19.185	19.218	19.846	20.164	20.482	20.792	21.094	21,305	21.685	5
	18.846	19.182	19.218	19.846	20.164	20°482	20.792	21'094	21,301	31,981	64
63	18.846	19.182	19.218	19.846	20.164	20'482	20.792	21.094	21,301	21,981	3
2	18.846	19.182	19.218	19.846	20.164	20.482	20.491	21'094	21,300	21.680	2
1	18.846	19.182	19.218	19.846	20.164	20'482	20.791	21.003	21,380	21.678	1
60	18.846	10.182	19.218	19.846	20.104	20'481	20'790	51,005	21.384	21.675	60
59	18.846	19.182	19.218	19.845	50,199	20.481	20'789	21.001	21.382	21.671	59
8	18.846	19,182	19.218	19.845	50,192	20.479	20.787	21.084	21,381	21.666	8
7	18.846	19.184	19.217	19.844	20,194	20.477	20'784	21.083	21.372	21.628	7
6	18.846	19.184	19.216	19.843	50,195	20'474	20.780	21.077	21.364	21.648	6
5	18.842	19.183	19.212	19'841	20°159	20.470	20.774	51.069	21.357	21.635	5
54	18.844	19.185	19.213	19.837	20.124	20.464	20.765	21.028	21'343	21.617	54
3	18.843	19.179	19.509	19.833	20.148	20°455	20.754	21.014	21.325	21.595	3
2	18.840	19°176	19.202	19.826	20,130	20'444	20.739	21'025	21.302	21.268	2
1	18.837	19.141	19'498	19.817	20.152	20.428	20.720	21,005	21.274	21.234	1
50	18.835	19.164	19'488	19.804	20'111	20.408	20.696	20'973	21.530	21'494	50
	39	38	37	36	35	34	33	32	31	30	

 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

Dura-	80	81	82	83	84	85	86	87	88	89	Dura-
tion.	3.918	3.662	3.416	3.180	2.954	2.739	2.534	2.340	2.155	1.981	tion.
0	.000	.000	,000	.000	,000	.000	.000	.000	.000	.000	0
1	.840	.829	.817	.804	'790	775	'759	'741	'723	.704	1
2	1.238	1.204	1.474	1.440	1.402	1,363	1,355	1'278	1.535	1.184	2
3	2.104	2.025	1.994	1.035	1.864	1.499	1.458	1.655	1'579	1.201	3
4	2.262	2.482	2.396	2,306	2,515	2.114	2.012	1,015	1.808	1.403	4
5	2.927	2.816	2'701	2.283	2,461	2.336	2,510	2.085	1.954	1.826	5
6	3.502	3'069	2.028	2.483	2.636	2°488 2°588	2'339	2.190	2.044	1.899	6
8	3.420	3.257	3.001	3.020	2°755 2°835	2.651	2.421	2.596	2,139	1,040	7 8
9	3.692	3.488	3.582	3.084	2'885	2.690	2,201	2.317	2'141	1'972	9
10	3.772	3.554	3.337	3.124	2,019	2'713	2.218	2.329	2'149	1.977	10
1	3.827	3.597	3.370	3'149	2.934	2.726	2.256	2.332	2,123	1.980	1
2	3.863	3.624	3.390	3.163	2.944	2.733	2.231	2.338	2.124	1.981	2
3	3.886	3.641	3'402	3.141	2.949	2.736	2.233	2'339	2.122	1,081	3
4	3,001	3.651	3.409	3.146	2.952	2.438	2.234	2.339	2.122	89	
15	3,000	3.656	3'412	3.148	2.953	2.739	2.234	2.340	88		
6	3,013	3.659	3'414	3.179	2.954	2.739	2.234	87	-	20	
7	3.016	3.661	3.412	3.179	2°954	2.739	86	22	21	24.255	
8	3.917	3.661	3.412	3,180	2'954	85	22		24.024	24.255	82
9	3.918	3.662	3.415	3.180	84	21	23	23.788	24.054	24.522	1
20	3.918	3.662	3,416	83	25	24	23.546	23.788	24.054	24'255	80
1	3,018	3.662	82	26		23.298	23.246	23.788	24.024	24.525	79
2	_	81	27		23.044	23.298	23.246	23.788	24'024	24.524	8
	80	28		22.783	23.044	23.298	23.246		24.024	24.254	7
	29		22.517	22.783	23.044	23.298	23.246	23.488	24'024	24'254	6
		22.245	22.217	22.483	23.044	23.538	23.246	23.488	24.054	24.524	5
	21.967	22.242	22.217	22.483	23.044	23.508	23.246	23.488	24.054	24.524	74
73	21.967	22.242	22.217			23.598	23.246	23.488	24.053	24.523	3
2	21.967	22.542	22.214	22.483	23.043	23.597	23.246	23.787	24.053	24.523	2
70	21'967	22.242	22.217	22'783	23.043	23.297	23.245	23.787	24'022	24.521	1
	21'967	22'245	22.217	22.783	23.043	23.297	23.545	23.786	24'021	24.249	70
69	21.967	22'245	22.217	22.783	23.043	23'296	23.244	23.783	24.019	24.544	69
7	21'967	22.245	22.217	22.782	23.041	23.296	23.240	23.780	24,015	24.532	8 7
6	21,066	22'244	25.216	22.481		23.292	23.237	23.775	24.006	24.530	6
5	21,066	22'244	22,212	22.780	23.038	23.589	23'533	23.769	23.998	24,550	5
64	21.965	22.243	22.214	22.778	23.034	23.584	23.527	23.761	23.988	24.207	64
3	21.064	22,541	22,211	22.774	23'030	23.548	23'519	23.751	23.975	24,101	3
2	21.963	22.239	22.208	22.769		23.269	23.208	23.738	23.958	24.171	2
1	21.960	22.532	22.203	22.763		23.228	23.494	23.720	23.938	24'147	1
60	21.956	22.530	22.496	22.754	23.003	23.544	23.476	23.699	23.913	24.114	60
59	21.951	22.553	22.487	22.742	22.988	23.556	23.454	23.673	23.882	24.085	59
8	21.944	22'213	22.475	22.726		23.503		23.642		24.041	8
7	21.034	22'201	22.459	22.707	22'946	23.175	23'395	23.605		23.993	7
6 5	21,004	22'184	22.439	22.683	22.882	23.142	23.357	23.261		23.938	6 5
54	21.883	22.128	22'414	22.618	22.883	23.105	23,315	23.210	23.633	23.875	_
3	21.856	22,138	22.383	22.246	22.842	23.002	23.259	23'451		23.805	54
2	21.824	22.069	22.303	22.226	22.738	23.002	53,130	23.309	23.478	23.637	2
1	21.785	22.024	25,525	22.468	22.674	22.868	23.025	23,552	23.387	23.239	1
50	21.738	21.971	22,105	22'402	22.600	22.788	22.965	23.131	23.586	23.432	50
	29	28	27	26	25	24	23	22	21	20	
			-/		-5	-4	-3				

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

 $2^{\frac{1}{2}}_{\text{DERT}}^{\text{PER}}$

Dura-	90	91	92	93	94	95	96	97	98	99	
tion.	1.816	1.661	1.514	1.379	1.248	1.133	1.018	.925	-833	•708	Dura- tion.
0	.000	.000	'000	000	.000	000	.000	.000	1000	,000	0
1	.682	.991	.636	.613	585	.261	.529	.505	•488	455	1
2	1,133	1,081	1.022	973	914	·858	.796	.751	.710	.646	2
3	1°420	1,339	1,522	1.124	1,088	1,008	'926	.863	.803	.708	3
4	1.296	1,490	1,383	1,581	1.122	1,081	.985	.010	:833	99	
5 6	1,699	1.575	1.451	1,334	1,518	1'114	1,010	, 925	98	IO	
7	1.757	1.642	1.485	1,361	1.238	1,158	1,018	97	II		
8	1.803	1.653	1,205	1.378	1'246	1'133 95	96	12		26.259	
9	1.810	1.658	1.213	1'379	94		13	25.900	26.082	26.259	92
10	1.814	1.661	1.214	93		14			26.082	26.259	1
1	1.815	1.661	92		15	25.521	25.713	25.000	26.085	26.529	90
2	1.819	91	Th	16	25.323	-	25.413	25.000	26.082	26°259	89
	90	18	17	25.120		25.21	25.713	25.900	26'082	26.259	8
	19	10	24.912	25.150	25.323	25.21	25.713	25'900	26.082	26°259	7
		24.698	24'912	25,150	25.323	25°520	25.713	25'900	26.082	26.259	6 5
	24.479	24.698	24'912	25.150	25.323	25,250	25.713	25'900	26.085	26°259	84
83	24.479	24.698	24'912	25.150	25.323	25.20	25.713	25.899	26.081	26.528	3
2	24.479	24.698	24.015	25.150	25.323	25.20	25.712	25.899	26.081	26.258	2
1	24'479	24.698	24.915	25.150	25.323	25.250	25.712	25.899	26°080	26.257	1
80	24.479	24.698	24.915	25.150	25.322	25.250	25.415	25.898	26.079	26.526	80
79	24'479	24.698	24.015	25.150	25.322	25.210	25'711	25.897	26.078	26.523	79
8	24.479	24.698	24.012	25.150	25,355	25.210	25.410	25.896	26.076	26.521	8
7 6	24'479	24.698	24.011		25.321	25.218	25.709	25.894	26.073	26.246	7
5	24.479	24.698	24.010	25 118	25.318	25.216	25.706	25.890 25.886	26.063	26.241	6 5
74	24.478	24.697	24'900	25.119	25,316	25.214	25.699	25.880	26.022	26.222	_
3	24.478	24.696	24'907		25'313	25.206	25.693	25.873	26.046	26.513	74
2	24.476	24.694	24.905			25.200	25.685	25.863	26.034	26.108	2
1	24.475	24.691	24.901	25.102	25.301	25.491	25.675	25.850	26.019	26.180	1
70	24.472	24.687	24.896	25.008	25.293	25.481	25.662	25.835	26.000	26.120	70
69	24.468	24.685	24.889	25.080	25.585	25.468	25.046	25.819	25.978	26.133	69
8	24.463	24.675	24.880	25.078	25.268	25.451	25.626	25'793	25.921	56,103	8
6	24.455	24.666	24.869	25.004	25.521	25'431	25.602	25.765	25'920	26.068	7
5	24'434	24.639	24.836	25.046	25.530	25'406	25.24	25.733 25.696	25.884	26.027	6 5
64	24'418	24.620	24.814	24.000	25.122 22.502	² 5'377 ² 5'343	25°541 25°502	25.653	25.795	25.029	64
3	24,399	24 597	24.787	24 999	25.140	25°303	25.458	25.604	25.741	25.871	3
2	24.375	24.240	24.755	24'932	25.000	25.528	25.408	25.249	25.681	25.806	2
1	24.346	24.537	24'717	24.889	25.02	25°206	25'351	25.487	25.615	25.735	1
60	24.313	24.498	24.674			25.147		25'418		25.656	60
59	24.543	24'453	24.624	0	24.938	25.081	25.216	25.342	25'459	25.240	59
8	24.550	24'401	24.267			25.008		25.528		25.476	8
7 6	24,143	24°342	24.202			24.027	25'051	25.166	25.274	25.375	7
5	24,013	24'276	24'430 24'349	24°575 24°489	24.210	24.838	24.956	25.067	25.024	25.710	6 5
54	23.067	24,118	24.260	24,394	24.218	24 740	24.743	24.843	24.036	25.053	54
3	23.881	24,027	24 200	24 394	24 510	24 034	24 743	24.418	24.807	24.889	3
2	23.786	23.026	2.1.056	24.177	24,501	24 326	24'494	24.282	24.669	24.747	2
1	23.682	23.815	23.040	24.056		24.263	24.356	24'4.12	24.252	24.296	1
50	23.268	23.696	23.814	23.024	24'026	24,151	24,510	24,501	24.366	24.436	50
	19	18	17	16	15	14	13	12	II	10	
						T					

O^{M(5)}

$2\frac{3}{4}$ per cent.

CONSTANTS.

Constant.	Number.	Logarithm.
$i \ (1+i) \ (1+i)^{\frac{1}{2}} \ (1+i)^{\frac{1}{4}} \ v \ v^{\frac{1}{4}} \ d$	°027°5 1°027 5 1°013 656 7 1°006 805 2 °973 236 0 °986 527 3 °993 240 8 °026 764 0	2·439 332 7 0·011 781 8 0·005 890 9 0·002 945 5 T·988 218 2 T·994 109 1 T·997 054 5 2·427 550 9

 $O^{M(5)}$

COMMUTATION TABLE

 $2^{\frac{3}{4}}$ per cent.

x	D_x	\mathbb{N}_x	S_x	C_x	\mathbf{M}_x	R_x	x
		IVX	Dit				
10	81 824	2 122 170	44 773 596	488°23	25 025.83	923 849°02	10
11	79 145	2 040 346	42 651 426	475°16	24 537.60	898 823°19	11
12	76 552	1 961 201	40 611 080	461°04	24 062.44	874 285°59	12
13	74 042	1 884 649	38 649 879	448°02	23 601.40	850 223°15	13
14	71 612	1 810 607	36 765 230	435°36	23 153.38	826 621°75	14
15	69 260	1 738 995	34 954 623	423.71	22 718 °02	803 468'37	15
16	66 983	1 669 735	33 215 628	412.37	22 294 °31	780 750'35	16
17	64 778	1 602 752	31 545 893	401.95	21 881 °94	758 456'04	17
18	62 642	1 537 974	29 943 141	391.19	21 479 °99	736 574'10	18
19	60 575	1 475 332	28 405 167	380.72	21 088 °80	715 094'11	19
20	58 573	1 414 757	26 929 835	371.66	20 708.08	694 005'31	20
21	56 633	1 356 184	25 515 078	363.37	20 336.42	673 297'23	21
22	54-754	1 299 551	24 158 894	354.18	19 973.05	652 960'81	22
23	52 935	1 244 797	22 859 343	346.26	19 618.87	632 987'76	23
24	51 172	1 191 862	21 614 546	338.52	19 272.61	613 368'89	24
25	49 464	1 140 690	20 422 684	331°93	18 934.09	594 096 28	25
26	47 808	1 091 226	19 281 994	324°97	18 602.16	575 162 19	26
27	46 203	1 043 418	18 190 768	318°61	18 277.19	556 560 03	27
28	44 648	997 215	17 147 350	313°27	17 958.58	538 282 84	28
29	43 140	952 567	16 150 135	307°54	17 645.31	520 324 26	29
30	41 678	909 427	15 197 568	303.19	17 337 77	502 678.95	30
31	40 259	867 749	14 288 141	298.44	17 034 58	485 341.18	31
32	38 883	827 490	13 420 392	294.13	16 736 14	468 306.60	32
33	37 548	788 607	12 592 902	291.02	16 442 01	451 570.46	33
34	36 252	751 059	11 804 295	287.88	16 150 99	435 128.45	34
35	34 994	714807	11 053 236	285.07	15 863'11	418 977.46	35
36	33 773	679813	10 338 429	282.57	15 578'04	403 114.35	36
37	32 586	646 040	9 658 616	281.07	15 295'47	387 536.31	37
38	31 433	613 454	9 012 576	279.80	15 014'40	372 240.84	38
39	30 312	582 021	8 399 122	278.73	14 734'60	357 226.44	39
40	29 222	551 709	7 817 101	278°17	14 455 87	342 491.84	40
41	28 162	522 487	7 265 392	278°09	14 177 70	328 035.97	41
42	27 130	494 325	6 742 905	278°74	13 899 61	313 858.27	42
43	26 125	467 195	6 248 580	279°47	13 620 87	299 958.66	43
44	25 146	441 070	5 781 385	280°54	13 341 40	286 337.79	44
45	24 193	415 924	5 340 315	282.51	13 060°86	272 996'39	45
46	23 263	391 731	4 924 391	284.45	12 778°35	259 935'53	46
47	22 356	368 468	4 532 660	287.17	12 493°90	247 157'18	47
48	21 470	346 112	4 164 192	290.07	12 206°73	234 663'28	48
49	20 605	324 642	3 818 080	293.38	11 916°66	222 456'55	49
50	19 761	304 037	3 493 438	297.06	11 623'28	210 539.89	50
51	18 935	284 276	3 189 401	301.06	11 326'22	198 916.61	51
52	18 127	265 341	2 905 125	305.35	11 025'16	187 590.39	52
53	17 336	247 214	2 639 784	310.35	10 719'81	176 565.23	53
54	16 562	229 878	2 392 570	315.32	10 409'46	165 845.42	54
			N - D + T				

 $O^{M(5)}$

COMMUTATION TABLE

 $2^{\frac{3}{4}}$ per cent.

x	D_x	\mathbb{N}_x	S_x	C_x	M_x	R_x	x
==							55
55 56	15 803.	213 316.	2 162 692		10 094'14	155 435°96 145 341°82	56
57	15 060.	197 513.	1 949 376	325'72	9 773.69	135 568.13	57
58	14 331.	182 453	1 751 863.	331.31	9 447 97	132 200 13	58
59	13 616.	168 122.	1 569 410°	336.77	8 779.89	117 003 50	59
	12 915.	154 506.		342°09			
60	12 227	141 591.	1 246 782.	347.65	8 437.80	108 223.61	60
61	11 552.	129 364.	1 102 101.	352.85	8 000.12	99 785.81	61
62	10 800.	117 812	975 827	357.23	7 737 30	91 695.66	62 63
63	10 241'	106 922,	828 012.	362.06	7 379 77	83 958.36	64
64	9 605'3	96 681.5	751 093.4	365.74	7 017.71	76 578.59	
65	8 982.5	87 075'9	654 412'2	368.97	6 651.97	69 560.88	65
66	8 373°1	78 093'4	567 336.3	371'11	6 283.00	62 908 91	66
67	7 777'9	69 720'3	489 242'9	372.24	5 911.89	56 625 91	67
68	7 197'5	61 942 4	419 522.6	372'43	5 539.65	50 714.02	68
69	6 632.4	54 744 9	357 580.2	371.00	5 167°22	45 174'37	69
70	6 083.0	48 112.5	302 835.3	368.51	4 796.22	40 007.15	70
71	5 552'9	42 028.6	254 722.8	363.74	4 428.01	35 210.93	71
72	5 040.2	36 475.7	212 694.2	357.60	4 064'27	30 782.02	72
73	4 548.0	31 435°2	176 218.2	349.20	3 706.67	26 718 65	73
74	4 076.8	26 887.2	144 783.3	339.36	3 357 17	23 011.98	74
75		•			3 017.81	19654.81	75
76	3 628.3	22 810.4	117 896'1	327.23		16 637.00	76
77	3 204.0	19 182°1	95 085.7	313.12	2 690.58	13 946.42	77
	2 805'1	15 978'1	75 903.6	297.17	2 377°43 2 080°26	11 568 99	78
78 79	2 432.8	13 173.0	59 925.5	279°25	1 801,01	9 488.73	79
	2 088°5	10 740°2	46 752.5	259.79			
80	1772.8	8 651.7	36 012.3	238.95	1 541.52	7 687.72	80
81	т 486°4	6 878 9	27 360.6	216.99	I 302°27	6 146.20	81
82	1 229'6	5 392.5	20 481.7	194'35	1 085.28	4 844°23	82
83	1 002°4	4 162'9	15 089,5	171°43	890.93	3 758.95	83
84	804°10	3 160.47	10 926.33	148.80	719.20	2 868.02	84
85	633.77	2 356.37	7 765.86	126.87	570'70	2 148.52	85
86	489*94	1 722.60	5 409°49	105'92	443.83	1 577.82	86
87	370.90	1 232.66	3 686.89	86.638	337.914	1 133 992	87
88	274°34	861.76	2 454°23	69,119	251.276	796.078	88
89	197.88	587.42	1 592°47	53.693	182.124	544.802	89
90	138.89	389°54	1 005.02	40.653	128.464	362.645	90
91	94.219	250.651	615.213	29.674	87.811	234'181	91
92	62.312	156.132	364.862	21.008	58.137	146.370	92
93	39.249	93.817	208.730	14'288	37.039	88.233	93
94	24.503	54.268	114.913	9,422 1	22.750 7	51,133 9	94
95	14'133	30.062	60.645	5.842 1	13°328 6	28.442 9	95
96	7.912 8				7.486 5	15.1143	
97	4.174 4	0 20			3.959 9	7.627 8	97
98	2°101 4				1.998 6	3.667 9	98
99	1.022 6			.530 8			
100	•464 4			*258 3	*445 2	.693 3	100
101	193 7			1	.186 0		101
102	·o62 8				.061 2		
	1 552 6	1020		1		i	

 $\mathbf{OM}(5)$ Logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{2}_{4 \text{ cent.}}^3$

	1	1				1			
x	$\log D_x$	$\log N_x$	log Cx	$\log \mathbf{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathrm{C}_x$	col M _x	x
10	4'912 88	6'326 78	2.688 63	4.398 39	5.087 12	7.673 22	3.311 37	5.601 61	10
11	'898 43	'309 70	.676 84	.389 83	.101 57	690 30	323 16	.610 17	11
12	'883 96	'292 52	.663 74	.381 34	.116 04	707 48	336 26	.618 66	12
13	'869 48	'275 23	.651 30	.372 94	.130 52	724 77	348 70	.627 06	13
14	'854 99	'257 82	.638 85	.364 62	.145 01	742 18	361 15	.635 38	14
15	*840 49	'240 30	'627 07	356 37	'159 51	759 70	'372 93	643 63	15
16	*825 97	'222 65	'615 29	348 20	'174 03	777 35	'384 71	651 80	16
17	*811 43	'204 87	'604 17	340 09	'188 57	795 13	'395 83	659 91	17
18	*796 87	'186 95	'592 39	332 03	'203 13	813 05	'407 61	667 97	18
19	*782 29	'168 89	'580 60	324 05	'217 71	831 11	'419 40	675 95	19
20	767 69	150 68	570 15	'316 14	232 31	*849 32	'429 85	.683 86	20
21	753 07	132 32	560 34	'308 28	246 93	*867 68	'439 66	.691 72	21
22	738 42	113 79	549 22	'300 44	261 58	*886 21	'450 78	.699 56	22
23	723 74	095 10	539 40	'292 68	276 26	*904 90	'460 60	.707 32	23
24	709 03	076 23	529 58	'284 94	290 97	*923 77	'470 42	.715 06	24
25	694 29	°057 17	'521 04	°277 24	'305 71	°942 83	*478 96	'722 76	25
26	679 50	°037 91	'511 84	°269 56	'320 50	°962 09	*488 16	'730 44	26
27	664 67	°018 46	'503 26	°261 91	'335 33	°981 54	*496 74	'738 09	27
28	649 80	5°998 79	'495 92	°254 27	'350 20	6°001 21	*504 08	'745 73	28
29	634 88	°978 90	'487 90	°246 63	'365 12	°021 10	*512 10	'753 37	29
30	619 90	'958 77	'481 72	'238 99	380 10	°041 23	518 28	761 01	30
31	604 86	'938 39	'474 85	'231 33	395 14	°061 61	525 15	768 67	31
32	589 76	'917 76	'468 53	'223 65	410 24	°082 24	531 47	776 35	32
33	574 59	'896 86	'463 93	'215 95	425 41	°103 14	536 07	784 05	33
34	559 34	'875 67	'459 21	'208 20	440 66	°124 33	540 79	791 80	34
35	°544 °0	*854 19	'454 95	'200 39	'456 00	'145 81	*545 °5	'799 61	35
36	°528 56	*832 39	'451 13	'192 51	'471 44	'167 61	*548 87	'807 49	36
37	°513 °03	*810 26	'448 82	'184 56	'486 97	'189 74	*551 18	'815 44	37
38	°497 38	*787 78	'446 84	'176 51	'502 62	'212 22	*553 16	'823 49	38
39	°481 61	*764 94	'445 18	'168 34	'518 39	'235 06	*554 82	'831 66	39
40	'465 71	°741 71	'444 32	'160 05	534 29	'258 29	555 68	*839 95	40
41	'449 66	°718 08	'444 18	'151 61	550 34	'281 92	555 82	*848 39	41
42	'433 45	°694 01	'445 20	'143 00	566 55	'305 99	554 80	*857 00	42
43	'417 06	°669 50	'446 33	'134 21	582 94	'330 50	553 67	*865 79	43
44	'400 47	°644 51	'448 00	'125 20	599 53	'355 49	552 00	*874 80	44
45	383 68	'619 01	'451 03	'115 97	'616 32	°380 99	548 97	.884 03	45
46	366 66	'592 99	'454 00	'106 47	'633 34	°407 01	546 00	.893 53	46
47	349 39	'566 40	'458 14	'096 70	'650 61	°433 60	541 86	.903 30	47
48	331 84	'539 22	'462 50	'086 60	'668 16	°460 78	537 50	.913 40	48
49	313 98	'511 40	'467 43	'076 15	'686 02	°488 60	532 57	.923 85	49
50	*295 80	'482 93	'472 85	.065 33	'704 20	*517 07	*527 15	°934 67	50
51	*277 26	'453 74	'478 66	.054 09	'722 74	*546 26	*521 34	°945 91	51
52	*258 32	'423 80	'484 80	.042 39	'741 68	*576 20	*515 20	°957 61	52
53	*238 96	'393 07	'491 86	.030 18	'761 04	*606 93	*508 14	°969 82	53
54	*219 11	'361 50	'498 75	.017 43	'780 89	*638 50	*501 25	°982 57	54
		!	TAT						

OM(5) LOGARITHMS AND CO-LOGARITHMS OF D_x , N_x , C_x , M_x $2^{\frac{3}{4}}$ PER CENT.

						·			
x	$\log \mathcal{D}_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	$\operatorname{col} \mathrm{C}_x$	col M _x	x
55	4.198 75	5°329 02	2.505 76	4.004 07	5·801 25	6.670 98	3.494 24	5°995 93	55
56	.177 82	°295 60	.512 84	3.990 06	·822 18	.704 40	.487 16	4°009 94	56
57	.156 28	°261 15	.520 23	.975 34	·843 72	.738 85	.479 77	°024 66	57
58	.134 06	°225 62	.527 33	.959 84	·865 94	.774 38	.472 67	°040 16	58
59	.111 10	°188 95	.534 14	.943 49	·888 90	.811 05	.465 86	°056 51	59
60	.087 33	°151 04	541 14	'926 23	'912 67	.848 96	'458 86	°073 77	60
61	.062 68	°111 81	547 59	'907 96	'937 32	.888 19	'452 41	°092 04	61
62	.037 05	°071 19	553 31	'888 59	'962 95	.928 81	'446 69	°111 41	62
63	.010 36	°029 07	558 77	'868 04	'989 64	.970 93	'441 23	°131 96	63
64	3.982 51	4°985 34	563 17	'846 20		5.014 66	'436 83	'153 80	64
65	'953 40	'939 90	*566 99	'822 95	'046 60	'060 10	'433 01	177 05	65
66	'922 89	'892 61	*569 50	'798 17	'077 11	'107 39	'430 50	201 83	66
67	'890 86	'843 36	*570 83	'771 73	'109 14	'156 64	'429 17	228 27	67
68	'857 18	'791 99	*571 05	'743 48	'142 82	'208 01	'428 95	256 52	68
69	'821 67	'738 34	*569 37	'713 26	'178 33	'261 66	'430 63	286 74	69
70 71 72 73 74	'784 18 '744 52 '702 47 '657 82 '610 32	682 26 623 54 562 00 497 42 429 55	.566 10 .560 80 .553 39 .543 45 .530 67	680 90 646 21 608 98 568 98	'215 82 '255 48 '297 53 '342 18 '389 68	'317 74 '376 46 '438 00 '502 58 '570 45	'433 90 '439 20 '446 61 '456 55 '469 33	'319 10 '353 79 '391 02 '431 02 '474 03	70 71 72 73 74
75	'559 70	'358 13	'514 85	'479 69	'440 30	641 87	'485 15	'520 31	75
76	'505 69	'282 90	'495 75	'429 85	'494 31	717 10	'504 25	'570 15	76
77	'447 94	'203 53	'473 01	'376 11	'552 06	796 47	'526 99	'623 89	77
78	'386 11	'119 68	'445 99	'318 12	'613 89	880 32	'554 01	'681 88	78
79	'319 83	'031 01	'414 63	'255 51	'680 17	968 99	'585 37	'744 49	79
80	'248 65	3.937 10	'378 31	°187 87	751 35	4.062 90	.621 69	.812 13	80
81	'172 13	.837 52	'336 44	°114 70	827 87	.162 48	.663 56	.885 30	81
82	'089 76	.731 79	'288 58	°035 54	910 24	.268 21	.711 42	.964 46	82
83	'001 02	.619 40	'234 08	2°949 84	998 98	.380 60	.765 92	3.050 16	83
84	2'905 31	.499 75	'172 60	°857 03	3094 69	.500 25	.827 40	.142 97	84
85	.801 93	'372 24	103 37	'756 41	198 07	.627 76	·896 63	*243 59	85
86	.690 14	'236 18	024 97	'647 22	309 86	.763 82	·975 03	*352 78	86
87	.569 26	'090 84	1937 71	'528 80	430 74	.909 16	2·062 29	*471 20	87
88	.438 29	2'935 39	839 60	'400 15	561 71	3.064 61	·160 40	*599 85	88
89	.296 40	'768 95	729 92	'260 45	703 60	.231 05	·270 08	*739 55	89
90	142 67	°59° 55	.609 09	108 78	·857 33	*409 45	390 91	·891 22	90
91	1975 52	°399 °7	.472 37	1943 55	2·024 48	*600 93	527 63	2·056 45	91
92	794 59	°193 49	.324 25	764 45	·205 41	*806 51	675 75	·235 55	92
93	597 14	1°972 28	.154 96	568 66	·402 86	2*027 72	845 04	·431 34	93
94	383 87	°734 54	0.974 15	356 99	·616 13	*265 46	1.025 85	·643 01	94
95 96 97 98 99	°150 24 0°898 33 °620 59 °322 50 °009 69	°478 06 °202 27 0°904 14 °584 89 °241 42	.766 57 .547 36 .292 54 .009 69	124 79 0.874 28 597 68 300 73 1.989 45	·849 76 ī·101 67 ·379 41 ·677 50 ·990 31	'521'94 '797'73 T'095'86 '415'11 '758'58	°233 43 °452 64 °707 46 °990 31 °°275 09	.875 21 1.125 72 .402 32 .699 27 0.010 55	95 96 97 98 99
100	7.666 92	7·857 88	°412 10	.648 56	o:333 o8	0'142 12	.587 90	728 39	100
101	•287 16	·409 09	°099 28	.271 61	:712 84	'590 91	.900 72		101
102	2.798 25	2·798 25	2°786 47	2.786 47	1:201 75	J'201 75	1.213 53		102

 $O^{M(5)}$

VALUES OF a_x , Λ_x , P_x , and of \overline{a}_x , $\overline{\Lambda}_x$, \overline{P}_x

 $2^{\frac{3}{4}}$ PER CENT.

	1	1	1	1	1	i .	
x	a_x	Λ_x	P_x	\overline{a}_x	$\overline{\mathbf{A}}_x$	$\overline{\mathbf{P}}_x$	x
10 11 12 13 14	24.936 24.779 24.619 24.453 24.283	'30 585 '31 003 '31 433 '31 876 '32 332	'01 179 '01 203 '01 227 '01 252 '01 279	25.433 25.276 25.116 24.950 24.780	'31 004 '31 430 '31 864 '32 314 '32 775	'01 219 '01 243 '01 295 '01 323	10 11 12 13 14
15	24.108	'32 800	'01 306	24.605	'33 250	°01 351	15
16	23.928	'33 284	'01 335	24.425	'33 738	°01 381	16
17	23.742	'33 780	'01 365	24.239	'34 243	°01 413	17
18	23.552	'34 289	'01 397	24.049	'34 758	°01 445	18
19	23.356	'34 814	'01 429	23.853	'35 290	°01 479	19
20	23°154	35 355	'01 464	23.651	35 838	'01 515	20
21	22°947	35 910	'01 500	23.444	36 400	'01 553	21
22	22°734	36 477	'01 537	23.231	36 977	'01 592	22
23	22°516	37 063	'01 576	23.013	37 569	'01 633	23
24	22°292	37 663	'01 617	22.789	38 176	'01 675	24
25 26 27 28 29	22.061 21.825 21.335 21.081	38 278 38 910 39 559 40 223 40 903	'01 660 '01 705 '01 752 '01 801 '01 852	22.558 22.322 22.080 21.832 21.578	38 803 39 443 40 100 40 773 41 462	'01 720 '01 767 '01 816 '01 868 '01 921	25 26 27 28 29
30	20.820	'41 600	°01 906	21'317	'42 170	°01 978 °02 038 °02 100 °02 165 °02 234	30
31	20.554	'42 313	°01 963	21'051	'42 891		31
32	20.282	'43 042	°02 023	20'779	'43 629		32
33	20.002	'43 788	°02 085	20'499	'44 389		33
34	19.717	'44 551	°02 150	20'214	'45 162		34
35	19'426	'45 33°	'02 219	19'923	'45 952	.02 306	35
36	19'129	'46 126	'02 292	19'626	'46 757	.02 382	36
37	18'826	'46 939	'02 368	19'323	'47 579	.02 462	37
38	18'517	'47 767	'02 448	19'014	'48 418	.02 546	38
39	18'201	'48 610	'02 532	18'698	'49 275	.02 635	39
40	17.880	'49 47°	°02 620	18.377	.50 146	'02 729	40
41	17.553	'5° 344	°02 714	18.050	.51 033	'02 827	41
42	17.221	'51 233	°02 812	17.718	.51 933	'02 931	42
43	16.883	'52 137	°02 915	17.380	.52 850	'03 041	43
44	16.540	'53 °55	°03 025	17.037	.53 781	'03 157	44
45 46 47 48 49	16°192 15°839 15°482 15°120 14°755	53 987 54 930 55 887 56 854 57 832	°03 140 °03 262 °03 391 °03 527 °03 671	16.689 16.336 15.979 15.617	54 725 55 683 56 651 57 633 58 623	°03 279 °03 409 °03 545 °03 690 °03 844	45 46 47 48 49
50	14°386	58 821	°03 823	14.882	•59 627	°04 007	50
51	14°013	59 818	°03 984	14.509	•60 639	°04 179	51
52	13°638	60 823	°04 155	14.134	•61 656	°04 362	52
53	13°260	61 833	°04 336	13.756	•62 682	°04 557	53
54	12°880	62 852	°04 528	13.376	•63 713	°04 763	54

OM(5)

values of a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

 $2^{\frac{3}{4}}$ per

x	α_x	Λ_x	P_x	\bar{a}_x	$\overline{\Lambda}_x$	$\overline{\mathrm{P}}_{x}$	æ
55	12,498	63 873	04 732	12'994	64 749	.04 983	55
56 57	12,112	·64 899 ·65 927	°04 948	12.21	·65 788 ·66 830	°05 217 °05 466	56 57
58	11'347	66 955	05 170	11.843	67 872	05 731	58
59	10.963	67 981	05 683	11'459	.68 913	.06 014	59
60	10.280	.69 008	.05 959	11.072	69 955	.06 316	60
61	10,108	70 029	05 959	10.693	'70 991	.06 639	61
62	9.818	71 046	.06 567	10,313	72 022	.06 984	62
63	9.440	.72 058	06 902	9.935	.73 048	.07 353	63
64	9.062	'73 062	.07 259	9.260	.74 065	.07 747	64
65	8.694	74 054	.07 639	9.188	75 074	.08 171	65
66	8.327	.75 038	.08 046	8.821	.46 071	.08 624	66
67	7.964	.46 010	.08 479	8.458	·77 °55	.00 111	67
68	7.606	.76 966	.08 943	8.099	.48 024	.09 634	68
69	7.254	'77 909	·09 439	7.747	.78 983	.10 192	69
70	6.908	.78 835	.09 969	7.401	79 923	10 799	70
71	6.269	'79 743	10 536	7.061	.80 845	11 450	71
72	6.532	.80 632	11 142	6.458	81 747	12 150	72
73 74	5.912	.81 500	11 791	6.403	82 629	12 905	73
	5.292	.82 347	12 486	6.086	.83 490	13 719	74
75	5.584	.83 174	13 230	5.777	.84 328	14 597	75
76 77	4.987	·83 977	14 027	5.476	85 144	°15 548	76
78	4.696	·84 756	14879	5.182	·85 935 ·86 700	17 685	77 78
79	4°415 4°143	·85 509 ·86 234	15 792 16 769	4.629	.87 441	.18 888	79
80	3.880	.86 940	17 814		.88 155	20 191	80
81	3.628	·87 613	17 814	4.366 4.113	.88 843	20 191	81
82	3.386	.88 263	20 126	3.869	.89 503	'23 132	82
83	3.123	.88 883	'21 401	3.635	90.138	24 795	83
84	2.930	.89 479	.22 766	3.411	.90 746	'26 601	84
85	2.418	'90 049	'24 220	3'197	'91 326	.28 563	85
86	2.216	.90 590	25 766	2'994	91 879	.30 692	86
87	2.323	91 105	27 413	2.799	.92 406	.33 010	87
88	2'141	91 593	*29 158	2.612	92 906	35 527	88
89	1,969	92 056	.31 010	2,440	.93 380	.38 266	89
90	1.802	92 493	32 978	2.274	.93 831	.41 263	90
91	1.652	92 903	35 033	2.118	94 253	'44 493	91
92	1,200	93 295	'37 236	1,969	.94 658	.48 067	92
93	1.372	93 653	39 480	1.833	95 028	.21 821	93
94	1'242	.93 998	'41 923	1,699	'95 390	'56 131	94
95	1.152	'94 308	44 333	1.281	95 712	60 550	95
96 97	1,013	94 613	•46 990	1'463	96 032	65 649	96
98	.830	94 862	49 379 51 980	1.366 1.366	'96 294 '96 556	'70 499 '76 058	98
99	705	95 447	.55 980	1,130	96 939	.85 053	99
100	552	95 447	61 756	.081		'99 242	100
101	324	95 301	72 865	746	97 339	1,31 546	101
102	000	97 324	97 324	415	98 874	2.38 534	102
		773-4	773-4	1 1-3		0.01	

OM(5)

LOGARITHMS OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x 2\frac{3}{4} per

x	$\log a_x$	$\log \mathrm{A}_x$	$\log \mathrm{P}_x$	$\log \overline{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_{x}$	x
10	1°413 90	T·485 51 '491 40 '497 38 '503 46 '509 63	2.071 61	1°405 40	7'491 42	2.086 00	10
11	°411 27		.080 13	'402 71	'497 34	094 65	11
12	°408 56		.088 82	'399 95	'503 30	103 36	12
13	°405 75		.097 71	'397 07	'509 39	112 30	13
14	°402 83		.106 80	'394 10	'515 54	121 43	14
15 16 17 18 19	399 81 396 68 393 44 390 08 386 60	'515 88 '522 23 '528 66 '535 16 '541 76	'116 07 '125 55 '135 22 '145 08 '155 16	391 02 387 83 384 51 381 10	'521 79 '528 12 '534 57 '541 05 '547 65	'130 75 '140 29 '150 05 '159 96 '170 12	15 16 17 18 19
20	*382 99	548 45	165 46	'373 85	554 34	180 50	20
21	*379 25	555 21	175 96	'370 03	561 10	191 06	21
22	*375 37	562 02	186 65	'366 07	567 93	201 86	22
23	*371 36	568 94	197 58	'361 97	574 83	212 85	23
24	*367 20	575 91	208 71	'357 73	581 79	224 07	24
25	*362 88	'582 95	'220 07	'353 3°	588 87	'235 58	25
26	*358 41	'590 06	'231 65	'34 ⁸ 73	595 97	'247 24	26
27	*353 79	'597 24	'243 45	'344 °°	603 14	'259 14	27
28	*348 99	'604 47	'255 48	'339 °9	610 37	'271 28	28
29	*344 °2	'611 75	'267 73	'334 °I	617 65	'283 64	29
30	'338 87	619 09	'280 22	'328 73	'625 00	'296 27	30
31	'333 53	626 47	'292 94	'323 27	'632 37	'309 10	31
32	'328 00	633 89	'305 89	'317 62	'639 78	'322 16	32
33	'322 27	641 36	'319 09	'311 73	'647 28	'335 54	33
34	'316 33	648 86	'332 53	'305 65	'654 77	'349 12	34
35	'310 19	'656 39	'346 20	·299 35	662 30	'362 95	35
36	'303 83	'663 95	'360 12	·292 83	669 85	'377 01	36
37	'297 23	'671 53	'374 30	·286 07	677 42	'391 34	37
38	'290 40	'679 13	'388 73	·279 07	685 01	'405 93	38
39	'283 33	'686 73	'403 40	·271 80	692 63	'420 83	39
40	*276 00	*694 34	'418 34	*264 27	700 24	'435 96	40
41	*268 42	*701 95	'433 53	*256 48	707 85	'451 37	41
42	*260 56	*709 55	'448 99	*248 41	715 44	'467 03	42
43	*252 44	*717 15	'464 71	*240 05	723 05	'483 00	43
44	*244 04	*724 73	'480 69	*231 39	730 63	'499 23	44
45	'235 33	732 29	'496 96	'222 43	738 19	'515 75	45
46	'226 33	739 81	'513 48	'213 15	745 72	'532 58	46
47	'217 01	747 31	'530 30	'203 55	753 21	'549 65	47
48	'207 38	754 76	'547 38	'193 60	760 67	'567 07	48
49	'197 42	762 17	'564 75	'183 33	768 07	'584 75	49
50	*187 13	769 53	*582 40	*172 66 *161 64 *150 27 *138 49 *126 33	7775 44	602 79	50
51	*176 48	776 83	*600 35		7782 75	621 11	51
52	*165 48	784 07	*618 59		789 98	639 72	52
53	*154 11	791 22	*637 11		797 14	658 65	53
54	*142 39	798 32	*655 93		804 23	677 90	54

OM(5) LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x $2\frac{3}{4}$ cent.

x	$\log \mathrm{a}_x$	$\log \mathrm{A}_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
55	1.130 27	7·805 32	2.675 05	1'113 74 '100 75 '087 32 '073 46 '059 15	7.811 23	2.697 49	55
56	.117 78	·812 24	.694 46		.818 15	.717 40	56
57	.104 87	·819 06	.714 19		.824 97	.737 65	57
58	.091 56	·825 78	.734 22		.831 69	.758 22	58
59	.077 85	·832 39	.754 54		.838 30	.779 16	59
60	063 71	*838 90	.775 19	°044 34	·844 82	·800 48	60
61	049 13	*845 28	.796 15	°029 10	·851 20	·822 10	61
62	034 14	*851 54	.817 40	°013 39	·857 47	·844 08	62
63	018 71	*857 68	.838 97	°0997 17	·863 61	·866 44	63
64	002 83	*863 69	.860 86	°980 46	·869 61	·889 16	64
65	0.986 50	*869 55	·883 05	'963 23	*875 49	'912 26	65
66	.969 72	*875 28	·905 56	'945 50	*881 22	'935 72	66
67	.952 50	*880 87	·928 37	'927 25	*886 80	'959 55	67
68	.934 81	*886 30	·951 49	'908 46	*892 24	'983 79	68
69	.916 67	*891 59	·974 92	'889 14	*897 53	T'008 39	69
70	·898 o8	·896 72	.998 64	·869 27	'902 67	.033 38	70
71	·879 o2	·901 69	7.022 67	·848 86	'907 65	.058 81	71
72	·859 53	·906 51	.046 98	·827 91	'912 47	.084 58	72
73	·839 60	·911 16	.071 56	·806 39	'917 13	.110 76	73
74	·819 23	·915 65	.096 42	·784 31	'921 63	.137 32	74
75	798 43	'919 99	°121 56	761 69	'925 97	164 26	75
76	777 21	'924 16	°146 95	738 49	'930 15	191 67	76
77	755 59	'928 17	°172 58	714 72	'934 17	219 45	77
78	733 57	'932 01	°198 44	690 41	'938 02	247 61	78
79	711 18	'935 68	°224 50	665 52	'941 72	276 19	79
80 81 82 83 84	.688 45 .665 39 .642 03 .618 38	'939 22 '942 57 '945 78 '948 82 '951 72	'250 77 '277 18 '303 75 '330 44 '357 28	640 09 614 13 587 62 560 54 532 92	'945 25 '948 62 '951 84 '954 91 '957 83	°305 16 °334 49 °364 21 °394 36 °424 90	80 81 82 83 84
85	'570 31	'954 48	384 17	*504 80	960 59	'455 80	85
86	'546 04	'957 08	411 04	*476 19	963 22	'487 03	86
87	'521 58	'959 54	437 96	*447 05	965 70	'518 65	87
88	'497 10	'961 86	464 76	*417 49	968 04	'550 56	88
89	'472 55	'964 05	491 50	*387 44	970 25	'582 81	89
90 91 92 93 94	*447 88 *423 55 *398 90 *375 14 *350 67	°966 11 °968 03 °969 86 °971 52 °973 12	518 23 544 48 570 96 596 38	356 79 326 01 294 31 263 09 230 30	°972 35 °974 30 °976 16 °977 85 °979 50	.615 56 .648 29 .681 85 .714 76 .749 20	90 91 92 93 94
95	'327 82	'974 55	646 73	198 85	'980 97	'782 11	95
96	'303 94	'975 95	672 01	165 19	'982 42	'817 23	96
97	'283 55	'977 °9	693 54	135 42	'983 60	'848 18	97
98	'262 39	'978 23	715 84	103 63	'984 78	'881 14	98
99	'231 73	'979 76	748 03	056 68	'986 36	'929 69	99
100	190 96	'981 64	°790 68	7.991 59	*988 29	'996 70	100
101	121 93	'984 45	°862 52	.873 03	*991 12	0'118 10	101
102	000 00	'988 22	°988 22	.618 08	*995 08	377 00	102



O^{M(5)}

3 PER CENT.

CONSTANTS.

Constant	Number	Logarithm
$i \ (1+i) \ (1+i)^{\frac{1}{2}} \ (1+i)^{\frac{1}{4}} \ v \ v^{\frac{1}{2}} \ v^{\frac{1}{4}} \ d \ \delta$	'03 1'03 1'014 889 2 1'007 417 1 '970 873 8 '985 329 3 '992 637 5 '029 126 2 '029 558 8	2·477 121 3 0·012 837 2 0·006 418 6 0·003 209 3 T·987 162 8 T·993 581 4 T·996 790 7 2·464 284 0 2·470 686 8

OM(5)

COMMUTATION TABLE

3 PER

x	D_x	\mathbb{N}_x	S_x	C_x	\mathbf{M}_x	R_x	x
10	79 859	1 974 033	40 386 800	475'35	22 363'10	797 721'49	10
11	77 058	1 894 174	38 412 767	461'51	21 887'75	775 358'39	11
12	74 352	1 817 116	36 518 593	446'70	21 426'24	753 470'64	12
13	71 740	1 742 764	34 701 477	433'03	20 979'54	732 044'40	13
14	69 217	1 671 024	32 958 713	419'78	20 546'51	711 064'86	14
15	66 781	1 601 807	31 287 689	407'55	20 126'73	690 518'35	15
16	64 429	1 535 026	29 685 882	395'68	19 719'18	670 391'62	16
17	62 156	1 470 597	28 150 856	384'74	19 323'50	650 672'44	17
18	59 961	1 408 441	26 680 259	373'54	18 938'76	631 348'94	18
19	57 841	1 348 480	25 271 818	362'66	18 565'22	612 410'18	19
20	55 794	1 290 639	23 923 338	353'17	18 202'56	593 844'96	20
21	53 816	1 234 845	22 632 699	344'45	17 849'39	575 642'40	21
22	51 904	1 181 029	21 397 854	334'92	17 504'94	557 793'01	22
23	50 057	1 129 125	20 216 825	326'64	17 170'02	540 288'07	23
24	48 273	1 079 068	19 087 700	318'56	16 843'38	523 118'05	24
25	46 548	1 030 795	18 008 632	311.60	16 524'82	506 274.67	25
26	44 881	984 247	16 977 837	304.33	16 213'22	489 749.85	26
27	43 269	939 366	15 993 590	297.65	15 908'89	473 536.63	27
28	41 711	896 097	15 054 224	291.95	15 611'24	457 627.74	28
29	40 204	854 386	14 158 127	285.92	15 319'29	442 016.50	29
30	38 747	814 182	13 303 741	281.19	15 033'37	426 697.21	30
31	37 338	775 435	12 489 559	276.11	14 752'18	411 663.84	31
32	35 974	738 097	11 714 124	271.46	14 476'07	396 911.66	32
33	34 655	702 123	10 976 027	267.95	14 204'61	382 435.59	33
34	33 377	667 468	10 273 904	264.41	13 936'66	368 230.98	34
35	32 141	634 091	9 606 436	261.19	13 672'25	354 294.32	35
36	30 944	601 950	8 972 345	258.27	13 411'06	340 622.07	36
37	29 784	571 006	8 370 395	256.28	13 152'79	327 211.01	37
38	28 660	541 222	7 799 389	254.50	12 896'51	314 058.22	38
39	27 571	512 562	7 258 167	252.91	12 642'01	301 161.71	39
40 41 42 43 44 45	26 515 25 491 24 497 23 533 22 596 21 687	484 991 458 476 432 985 408 488 384 955 362 359	6 745 605 6 260 614 5 802 138 5 369 153 4 960 665 4 575 710	251.48 251.48 252.63	12 389 10 12 137 31 11 886 20 11 635 11 11 383 98	288 519.70 276 130.60 263 993.29 252 107.09 240 471.98	40 41 42 43 44 45
46	20 802	340 672	4 213 351	253'75	10 879'87	217 955.50	46
47	19 943	319 870	3 872 679	255'55	10 626'12	207 075.63	47
48	19 106	299 927	3 552 809	257'51	10 370'57	196 449.51	48
49	18 292	280 821	3 252 882	259'81	10 113'06	186 078.94	49
50	17 500	262 529	2 972 061	262'43	9 853'25	175 965.88	50
51	16 728	245 029	2 709 532	265'33	9 590'82	166 112.63	51
52	15 975	228 301	2 464 503	268'45	9 325'49	156 521.81	52
53 54	15 241 14 525	212 326 197 085	2 236 202 2 023 876	272.19	9 057 04 8 784 85	147 196.32	53 54

 $O^{M(5)}$

COMMUTATION TABLE

3 PER CENT.

x	D_x	\mathbb{N}_x	S_x	\mathbf{C}_{x}	\mathbf{M}_x	R_x	x
55	13 826.	182 560°	1 826 791°	279.68	8 508.98	129 354'43	55
56	i3 144°	168 734	1 644 231	283.29	8 229.30	120 845.45	56
57	12 477	155 590°	1 475 497		7 945 71	112 616,12	57
58	11826.	143 113	1 319 907		7 657 96	104 670.44	58
59	11 100,	131 287.	1 176 794	295.68	7 366.18	97 012.48	59
60	10 568.	120 097	1 045 507	299.75	7 070'50	89 646.30	60
61	9 960.9	109 528.8	925 409'7		6 770'75	82 575.80	61
62	9 367.2	99 567 9	815 880.0		6 467.25	75 805.02	62
63	8 787.6	90 200'7	716 313.0	0 , ,	6 160.47	69 337.80	63
64	8 221.8	81 413'1	626 112.3	312.30	5 850.26	63 177'33	64
65	7 6700	73 191'3	544 699°2	314.50	5 538.26	57 326.77	65
66	7 132'3	65 521'3	471 507'9	315.35	5 223 97	51 788*51	66
67	6 609'2	58 389.0	405 986.6		4 908.62	46 564 54	67
68	6 101.5	51 779.8	347 597.6	314'94	4 593.08	41 655 92	68
69	5 608.2	45 678.6	295 817.8	312'97	4 278.14	37 062 84 .	69
70	5 132.5	40 070'1	250 139.2	309.86	3 965.17	32 784.70	70
71	4 672.9	34 937'9	210 069'1	305.36	3 655.31	28 819 53	71
72	4 231°4	30 265.0	175 131.5		3 349 95	25 164.22	72
73	3 808.7	26 033.6	144 866.5	291,08	3 050.48	21 814.27	73
74	3 405.8	22 224.9	118 832.6	282.82	2 758.20	18 763.79	74
75	3 023.8	18 810,1	96 607'7	272.02	2 475.68	16 005 29	75
76	2 663.7	15 795.3	77 788.6	259'71	2 203.63	13 529.61	76
77	2 326.4	13 131.6	61 993.3	245.86	1 943 92	11 325.98	77
78	2 012.8	10 805.5	48 861.7	230.47	1 698.06	9 382.06	78
79	1 723.7	8 792'4	38 056.2	213.89	1 467.59	7 684.00	79
80	1 459.6	7 068.7	29 264°1	196.56	1 253.70	6 216 41	80
81	1 220.8	2 600,1	22 195'4	177.79	1 057.44	4 962.71	81
82	1 007'4	4 388.3	16 586.3	158.85	879.65	3 905'27	82
83	819.26	3 380.87	12 197 95	139.48	720.80	3 025.62	83
84	655.62	2 561.61	8 817'08	121'03	581.03	2 304.82	84
85	515.20	1 905.99	6 255 47	102'95	459°99	1 723'80	85
86	397.54	1 390'49	4 349 48	85.734	357.037	1 263.812	86
87	300°22	992.95	2 958'99	69.958	271'303	906.775	88
89	221.25	692.43	1 966.04	55.676	201°345	635°472	89
	159.39	471'21	1			288*458	90
90 91	111.60	311.85	802'10	32.288	102°523	185.935	91
92	75°766 49°831	200°215	490°279	16.830	69°935	116.000	92
93	31,249	74.618	165.615	11'370	29°376	69.794	93
94	19.500	43.069	90.997	7.479 7	18.002 8	2 12 1	_
95	11,550	23.809	47.928	4.626 5	_		1
96	6.566 3	12.288 8					
97	3°297 7	6.322 5	11.230 4		3,113 6		97
98	1.656 1	3.024 8	5,504 8			2.873 2	
99	.803 6						
100	. 364 2	1			*347 8		100
101	1516			1 800			101
102	*049					'047 6	
	1	1	1		1		1

 $\mathbf{O^{M(5)}}$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{3}_{\text{cent.}}^{\text{per}}$

v	$\log \mathrm{D}_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathrm{C}_x$	$col M_x$	$\begin{bmatrix} x \\ - \end{bmatrix}$
10 11 12 13 14	4'902 32 '886 82 '871 29 '855 76 '840 21	6.295 36 .277 42 .259 38 .241 24 .222 99	2.677 02 .664 18 .650 02 .636 52 .623 02	4°349 53 °340 20 °330 94 °321 80 °312 74	5.097 68 	7·704 64 '722 58 '740 62 '758 76 '777 01	3'322 98 '335 82 '349 98 '363 48 '376 98	5.650 47 .659 80 .669 06 .678 20 .687 26	10 11 12 13 14
15	·824 65	'204 61	'610 18	303 77	'175 35	795 39	389 82	'696 23	15
16	·809 08	'186 12	'597 34	294 88	'190 92	·813 88	402 66	'705 12	16
17	·793 49	'167 49	'585 17	286 08	'206 51	·832 51	414 83	'713 92	17
18	·777 87	'148 74	'572 33	277 35	'222 13	·851 26	427 67	'722 65	18
19	·762 24	'129 85	'559 50	268 70	'237 76	·870 15	440 50	'731 30	19
20	'746 59	°110 81	547 98	'260 13	'253 41	·889 19	'452 02	739 87	20
21	'730 91	°091 61	537 13	'251 62	'269 09	·908 39	'462 87	748 38	21
22	'715 20	°072 26	524 95	'243 16	'284 80	·927 74	'475 05	756 84	22
23	'699 47	°052 74	514 07	'234 77	'300 53	·947 26	'485 93	765 23	23
24	'683 70	°033 05	503 20	'226 43	'316 30	·966 95	'496 80	773 57	24
25	667 90	.013 17	'493 60	'218 14	332 10	. 986 83	506 40	781 86	25
26	652 06	5.993 11	'483 34	'209 87	347 94	6.006 89	516 66	790 13	26
27	636 18	.972 84	'473 70	'201 64	363 82	. 027 16	526 30	798 36	27
28	620 25	.952 36	'465 31	'193 44	379 75	. 047 64	534 69	806 56	28
29	604 27	.931 66	'456 24	'185 24	395 73	. 068 34	543 76	814 76	29
30	588 24	'910 72	'449 00	'177 06	411 76	°089 28	551 00	·822 94	30
31	572 15	'889 55	'441 08	'168 86	427 85	°110 45	558 92	·831 14	31
32	555 99	'868 12	'433 70	'160 65	444 01	°131 88	566 30	·839 35	32
33	539 76	'846 41	'428 05	'152 43	460 24	°153 59	571 95	·847 57	33
34	523 45	'824 43	'422 27	'144 16	476 55	°175 57	577 73	·855 84	34
35	'507 06	·802 15	'416 96	135 84	'492 94	197 85	583 04	*864 16	35
36	'490 57	·779 56	'412 08	127 46	'509 43	220 44	587 92	*872 54	36
37	'473 98	·756 64	'408 71	119 01	'526 02	243 36	591_29	*880 99	37
38	'457 28	·733 38	'405 68	110 48	'542 72	266 62	594 32	*889 52	38
39	'440 45	·709 74	'402 96	101 82	'559 55	290 26	597 04	*898 18	39
40	'423 49	685 73	'401 04	.093 04	576 51	314 27	'598 96	906 96	40
41	'406 39	661 32	'399 86	.084 12	593 61	338 68	'600 14	915 88	41
42	'389 12	636 48	'399 82	.075 05	610 88	363 52	'600 18	924 95	42
43	'371 67	611 18	'399 89	.065 77	628 33	388 82	'600 11	934 23	43
44	'354 04	585 41	'400 51	.056 29	645 96	414 59	'599 49	943 71	44
45	'336 19	'559 14	'402 48	°046 59	.663 81	'440 86	597 52	'953 41	45
46	'318 11	'532 33	'404 40	°036 62	.681 89	'467 67	595 60	'963 38	46
47	'299 78	'504 97	'407 48	°026 37	.700 22	'495 03	592 52	'973 63	47
48	'281 18	'477 02	'410 79	°015 80	.718 82	'522 98	589 21	'984 20	48
49	'262 27	'448 43	'414 66	°004 88	.737 73	'551 57	585 34	'995 12	49
50	'243 03	'419 18	'419 02	3°993.58	.756 97	.580 82	580 98	4.006 42	50
51	'223 43	'389 22	'423 78	°981 85	.776 57	.610 78	576 22	.018 15	51
52	'203 44	'358 51	'428 87	°969 67	.796 56	.641 49	571 13	.030 33	52
53	'183 02	'327 01	'434 87	°956 98	.816 98	.672 99	565 13	.043 02	53
54	'162 12	'294 65	'440 70	°943 74	.837 88	.705 35	559 30	.056 26	54

 $\mathbf{OM}(5)$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{3}_{\mathsf{CENT}}^{\mathsf{PER}}$.

						1	1		
x	$\log \mathrm{D}_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$ $ col \mathbb{N}_x	$\operatorname{col} \operatorname{C}_x$	$\log \mathrm{M}_x$	x
55 56 57 58 59	4'140 70 '118 72 '096 13 '072 85 '048 83	5.261 41 .227 20 .191 98 .155 68 .118 22	2'446 66 '452 69 '459 02 '465 06 '470 81	3.929 88 .915 36 .900 13 .884 12 .867 24	5.859 30 .881 28 .903 87 .927 15 .951 17	6.738 59 .772 80 .808 02 .844 32 .881 78	3 553 34 547 31 540 98 534 94 529 19	4.070 12 .084 64 .099 87 .115 88 .132 76	55 56 57 58 59
60 61 62 63 64	'024 01 3'998 30 '971 61 '943 87 '914 97	'079 53 '039 53 4'998 12 '955 21 '910 69	'476 76 '482 16 '486 82 '491 23 '494 57	·849 45 ·830 64 ·810 72 ·789 62 ·767 20	'975 99 \$\frac{1}{2}\cdot \cdot \cd	'920 47 '960 47 5'001 88 '044 79 '089 31	523 24 517 84 513 18 508 77 505 43	'150 55 '169 36 '189 28 '210 38 '232 80	60 61 62 63 64
65 66 67 68 69	·884 80 ·853 23 ·820 15 ·785 41 ·748 85	·864 46 ·816 38 ·766 33 ·714 16 ·659 72	'497 33 '498 79 '499 06 '498 23 '495 50	743 38 718 00 690 96 662 11 631 25	'115 20 '146 77 '179 85 '214 59 '251 15	135 54 183 62 233 67 285 84 340 28	'502 67 '501 21 '500 94 '501 77 '504 50	256 62 282 00 309 04 337 89 368 75	65 66 67 68 69
70 71 72 73 74	°710 31 °669 58 °626 49 °580 78 °532 22	602 82 543 30 480 94 415 53 346 84	°491 16 °484 81 °476 35 °465 35 °451 51	°598 26 °562 92 °525 04 °484 37 °440 67	'289 69 '33° 42 '373 51 '419 22 '467 78	°397 18 °456 70 °519 06 °584 47 °653 16	508 84 515 19 523 65 534 65 548 49	401 74 437 08 474 96 515 63 559 33	70 71 72 73 74
75 76 77 78 79	480 55 425 48 366 68 303 79 236 45	°274 60 °198 53 °118 32 °033 63 3'944 11	'434 64 '414 48 '390 69 '362 62 '330 19	'393 7° '343 14 '288 68 '229 95 '166 61	'519 45 '574 52 '633 32 '696 21 '763 55	'725 40 '801 47 '881 68 '966 37 4'055 89	565 36 585 52 609 31 637 38	.606 30 .656 86 .711 32 .770 05 .833 39	75 76 77 78 79
80 81 82 83 84	164 22 086 64 003 22 2'913 42 '816 65	·849 34 ·748 89 ·642 30 ·529 03 ·408 51	*292 83 *249 89 *200 98 *145 43 *082 90	°098 19 °024 25 2°944 31 °857 81 °764 19	·835 78 ·913 36 ·996 78 $\bar{3}$ ·086 58 ·183 35	'150 66 '251 11 '357 70 '470 97 '591 49	707 17 750 11 799 02 854 57 917 10	'901 81 '975 75 3'055 69 '142 19 '235 81	80 81 82 83 84
85 86 87 88 89	'712 22 '599 38 '477 44 '345 41 '202 47	°280 12 °143 17 2°996 93 °840 56 °673 21	°012 61 1°933 15 °844 84 °745 67 °634 94	*662 75 *552 71 *433 45 *303 94 *163 36	·287 78 ·400 62 ·522 56 ·654 59 ·797 53	719 88 ·856 83 3.003 07 ·159 44 ·326 79	254 33 265 06	'337 25 '447 29 '566 55 '696 06 '836 64	85 86 87 88 89
90 91 92 93 94	°047 68 1°879 48 °697 50 °498 99 °284 66	*493 90 *301 50 *094 99 1*872 84 *634 16	.513 05 .375 28 .226 09 .055 75 0.873 89	°010 82 1°844 69 °664 70 °467 99 °255 41	.952 32 2.120 52 .302 50 .501 01 .715 34	.506 10 .698 50 .905 01 2.127 16 .365 84	.486 95 .624 72 .773 91 .944 25 T.126 11	.989 18 2.155 31 .335 30 .532 01 .744 59	90 91 92 93 94
95 96 97 98 99	°049 98 0°797 01 °518 22 °219 07 T°905 21	'376 74 '099 98 0'800 89 '480 70 '136 31	.665 25	°022 27 0°770 82 °493 26 °195 35 T·883 15	·950 02 ī·202 99 ·481 78 ·780 93 o·094 79	.623 26 .900 02 1.199 11 .519 30 .863 69	'334 75 '555 01 '810 89 0'094 79 '380 63	.977 73 1.229 18 .506 74 .804 65 0.116 85	95 96 97 98 99
100 101 102	.2.690 60 5.690 60	751 89 302 33 2.690 60	·305 50 2·991 63	.541 33 .163 46 <u>2</u> .677 77	.438 62 .819 44 1.309 40	°248 11 °697 67 1°309 40	.694 50 1.008 37 .322 23	0 0 .	100 101 102

 $O^{M(5)}$

VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x 3 PER CENT.

							_
x	α_x	Λ_x	P_x	\bar{a}_x	$\overline{\mathbf{A}}_x$	$\overline{\mathbf{P}}_x$	x
10	23°719	°28 003	°01 133	24°216	*28 420	'01 174 '01 197 '01 222 '01 248 '01 274	10
11	23°581	°28 404	°01 156	24°078	*28 828		11
12	23°440	°28 817	°01 179	23°937	*29 245		12
13	23°293	°29 244	°01 204	23°790	*29 680		13
14	23°142	°29 685	°01 230	23°639	*30 126		14
15	22°986	30 138	°01 257	23.483	*30 587	°01 303	15
16	22°825	30 606	°01 285	23.322	*31 063	°01 332	16
17	22°659	31 088	°01 314	23.156	*31 554	°01 363	17
18	22°490	31 585	°01 345	22.987	*32 053	°01 394	18
19	22°314	32 097	°01 377	22.811	*32 573	°01 428	19
20 21 22 23 24	22'132 21'946 21'754 21'557 21'354	'32 624 '33 167 '33 726 '34 300 '34 892	'01 445 '01 482 '01 521 '01 561	22°629 22°443 22°251 22°054 21°851	'33 111 '33 661 '34 229 '34 811 '35 411	°01 463 °01 500 °01 538 °01 578 °01 621	20 21 22 23 24
25	21'145	35 501	'01 603	21°642	36 029	°01 665	25
26	20'931	36 125	'01 647	21°428	36 661	°01 711	26
27	20'710	36 767	'01 694	21°207	37 315	°01 760	27
28	20'484	37 427	'01 742	20°981	37 983	°01 810	28
29	20'251	38 104	'01 793	20°748	38 671	°01 864	29
30	20°013	'38 799	°01 846	20°510	'39 375	'01 920	30
31	19°768	'39 510	°01 902	20°265	'40 099	'01 979	31
32	19°517	'40 240	°01 961	20°014	'40 841	'02 041	32
33	19°261	'40 989	°02 023	19°758	'41 598	'02 105	33
34	18°998	'41 755	°02 088	19°495	'42 375	'02 174	34
35	18.728	'42 538	°02 156	19'225	'43 173	'02 246	35
36	18.453	'43 340	°02 228	18'950	'43 986	'02 321	36
37	18.172	'44 160	°02 303	18'669	'44 817	'02 401	37
38	17.884	'44 999	°02 383	18'381	'45 668	'02 485	38
39	17.591	'45 853	°02 466	18'088	'46 534	'02 573	39
40	17°291	°46 725	°02 555	17.788	'47 421	.02 666	40
41	16°986	°47 613	°02 647	17.483	'48 322	.02 764	41
42	16°675	°48 521	°02 745	17.172	'49 242	.02 868	42
43	16°358	°49 442	°02 848	16.855	'50 179	.02 977	43
44	16°036	°50 379	°02 957	16.533	'51 130	.03 093	44
45	15.709	51 333	'03 072	16°206	'52 097	'03 215	45
46	15.377	52 301	'03 194	15°874	'53 078	'03 344	46
47	15.040	53 283	'03 322	15°536	'54 077	'03 481	47
48	14.698	54 278	'03 458	15°194	'55 088	'03 626	48
49	14.352	55 285	'03 601	14°848	'56 111	'03 779	49
50 51 52 53 54	14'002 13'648 13'291 12'931	56 305 57 335 58 375 59 424 60 481	'03 753 '03 914 '04 085 '04 266 '04 457	14'498 14'144 13'787 13'427 13'065	57 146 58 192 59 247 60 311 61 381	'03 942 '04 114 '04 297 '04 492 '04 698	50 51 52 53 54
	- '						

 $O^{M(5)}$

VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x

x	a_x	A_x	P_x	\bar{a}_x	$\overline{\mathrm{A}}_x$	$\overline{\mathbf{P}}_x$	x
55 56 57 58 59	12°204 11°838 11°470 11°101 10°732	61 543 62 609 63 680 64 755 65 828	°04 661 °04 877 °05 107 °05 351 °05 611	12°700 12°334 11°966 11°596	'62 460 '63 542 '64 630 '65 724 '66 814	°04 918 °05 152 °05 401 °05 668 °05 951	55 56 57 58 59
60 61 62 63 64	10°364 9°996 9°629 9°265 8°902	.66 902 .67 974 .69 041 .70 105	°05 887 °06 182 °06 495 °06 830 °07 186	10'859 10'491 10'124 9'759 9'396	'67 902 '68 990 '70 075 '71 153 '72 226	°06 253 °06 576 °06 922 °07 291 °07 687	60 61 62 63 64
65	8.542	72 207	.07 567	9°036	73 289	°08 110	65
66	8.187	73 244	.07 973	8°680	74 342	°08 564	66
67	7.834	74 269	.08 407	8°328	75 383	°09 052	67
68	7.487	75 284	.08 870	7°980	76 411	°09 575	68
69	7.144	76 278	.09 366	7°637	77 425	°10 138	69
70	6.808	77 259	°09 896	7.300	78 422	°10 743	70
71	6.477	78 224	°10 462	6.969	79 401	°11 394	71
72	6.152	79 168	°11 069	6.644	80 362	°12 096	72
73	5.835	80 092	°11 718	6.326	81 300	°12 851	73
74	5.526	80 993	°12 412	6.016	82 217	°13 666	74
75	5°224	.81 875	13 155	5'7'3	*83 112	14 547	75
76	4°930	.82 729	13 951	5'419	*83 982	15 498	76
77	4°645	.83 560	14 803	5'133	*84 828	16 526	77
78	4°368	.84 365	15 715	4'856	*85 647	17 638	78
79	4°101	.85 145	16 692	4'588	*86 440	18 842	79
80	3.843	·85 895	'17 736 '18 852 '20 045 '21 320 '22 682	4°329	·87 205	20 146	80
81	3.595	·86 618		4°079	·87 942	21 558	81
82	3.356	·87 315		3°839	·88 651	23 091	82
83	3.127	·87 981		3°609	·89 333	24 754	83
84	2.907	·88 622		3°388	·89 986	26 561	84
85	2.697	·89 234	24 134	3°177	90 610	.28 524	85
86	2.498	·89 811	25 677	2°975	91 205	.30 654	86
87	2.307	·90 367	27 322	2°783	91 773	.32 975	87
88	2.127	·90 893	29 066	2°601	92 312	.35 492	88
89	1.956	·91 388	30 914	2°428	92 824	.38 234	89
90	1°794	'91 863	32 879	2°263	93 311	°41 231	90
91	1°643	'92 302	34 929	2°109	93 766	°44 462	91
92	1°497	'92 726	37 129	1°961	94 204	°48 039	92
93	1°365	'93 111	39 369	1°826	94 604	°51 824	93
94	1°236	'93 487	41 807	1°693	94 995	°56 104	94
95 96 97 98 99	1'122 1'009 '917 '826	'93 819 '94 148 '94 415 '94 685 '95 047	'44 211 '46 864 '49 246 '51 838 '55 826	1°575 1°458 1°362 1°266 1°137	°95 344 °95 690 °95 975 °96 258 °96 640	.60 528 .65 627 .70 476 .76 027 .85 010	95 96 97 98 99
100	.551	.95 488	·61 580	*979	97 106	.38 113	100
101	.324	.96 139	·72 632	*746	97 796	1.31 181	101
102	.000	.97 087	·97 087	*415	98 774	1.31 181	102

 $O^{M(5)}$

LOGARITHMS OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x 3 PER CENT.

							CENT
x	log a _w	$\log A_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{P}_x$	x
10 11 12 13 14	1'393 04 '390 60 '388 09 '385 48 '382 78	1°447 21 °453 38 °459 65 °466 04 °472 53	2'054 17 '062 78 '071 56 '080 56 '089 75	1.384 10 .381 62 .379 07 .376 39 .373 63	ī·453 62 ·459 81 ·466 05 ·472 46 ·478 94	2.069 52 .078 20 .087 00 .096 08	10 11 12 13 14
15	'379 96	'479 12	°099 16	'37° 75	'485 54	'114 78 '124 47 '134 40 '144 39 '154 73	15
16	'377 04	'485 80	°108 76	'367 77	'492 24		16
17	'374 00	'492 59	°118 59	'364 66	'499 05		17
18	'370 87	'499 48	°128 61	'361 48	'505 87		18
19	'367 61	'506 46	°138 85	'358 14	'512 86		19
20	364 22	513 54	149 32	354 67	519 97	'165 30	20
21	360 70	520 71	160 01	351 08	527 13	'176 06	21
22	357 06	527 96	170 90	347 35	534 39	'187 04	22
23	353 27	535 30	182 03	343 49	541 72	'198 22	23
24	349 35	542 73	193 38	339 47	549 14	'209 68	24
25	345 27	55° 24	'204 97	335 30	556 65	*221 36	25
26	341 05	557 81	'216 76	330 98	564 20	*233 22	26
27	336 66	565 46	'228 80	326 48	571 88	*245 39	27
28	332 11	573 19	'241 08	321 83	579 59	*257 75	28
29	327 39	58° 97	'253 58	316 98	587 39	*270 42	29
30	'322 48	588 82	266 34	'311 97	595 22	283 26	30
31	'317 40	596 71	279 31	'306 75	603 13	296 38	31
32	'312 13	604 66	292 53	'301 33	611 10	309 76	32
33	'306 65	612 67	306 02	'295 74	619 07	323 33	33
34	'300 98	620 71	319 73	'289 92	627 11	337 18	34
35	295 09	628 78	333 69	283 87	635 21	351 35	35
36	288 99	636 89	347 90	277 61	643 31	365 71	36
37	282 66	645 03	362 37	271 12	651 44	380 32	37
38	276 10	653 20	377 10	264 37	659 61	395 24	38
39	269 29	661 37	392 08	257 39	667 77	410 37	39
40	262 24	669 55	'407 31	'250 13	675 97	'425 84	40
41	254 93	677 73	'422 80	'242 62	684 14	'441 54	41
42	247 36	685 93	'438 57	'234 82	692 34	'457 52	42
43	239 51	694 10	'454 59	'226 73	700 52	'473 79	43
44	231 37	702 25	'470 88	'218 35	708 68	'490 32	44
45	'222 95	710 40	'487 45	'209 68	716 81	507 14	45
46	'214 22	718 51	'504 29	'200 69	724 91	524 23	46
47	'205 19	726 59	'521 40	'191 34	733 01	541 68	47
48	'195 84	734 62	'538 78	'181 67	741 06	559 39	48
49	'186 16	742 61	'556 45	'171 67	749 05	577 38	49
50	'176 15	75° 55	'574 40	'161 31	756 99	'595 67	50
51	'165 79	758 42	'592 63	'150 57	764 86	'614 30	51
52	'155 07	766 23	'611 16	'139 47	772 67	'633 20	52
53	'143 99	773 96	'629 97	'127 98	780 40	'652 42	53
54	'132 53	781 62	'649 09	'116 11	788 03	'671 93	54

OM(5) LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x 3 per cent.

							_
x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \bar{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
55	1'120 71	7.789 18	2.668 47	1'103 80 '091 10 '077 95 '064 31 '050 26	7.795 60	2.691 80	55
56	'108 48	7.796 64	.688 16		.803 06	.711 96	56
57	'095 85	804 00	.708 15		.810 43	.732 48	57
58	'082 83	811 27	.728 44		.817 72	.753 41	58
59	'069 39	818 41	.749 02		.824 87	.774 60	59
60	°055 52	*825 44	.769 92	°035 79	*831 88	.796 10	60
61	°041 23	*832 34	.791 11	°020 82	*838 79	.817 97	61
62	°026 51	*839 11	.812 60	°005 35	*845 56	.840 21	62
63	°011 34	*845 75	.834 41	0°989 41	*852 19	.862 79	63
64	°0995 72	*852 23	.856 51	°972 96	*858 69	.885 73	64
65	'979 66	*858 58	·878 92	'956 00	.865 04	'909 04	65
66	'963 15	*864 77	·901 62	'938 53	.871 23	'932 70	66
67	'946 18	*870 81	·924 63	'920 54	.877 27	'956 73	67
68	'928 75	*876 70	·947 95	'902 01	.883 16	'981 14	68
69	'910 87	*882 40	·971 53	'882 94	.888 88	T'005 95	69
70	*892 51	*887 95	°995 44	*863 32	*894 44	°031 13	70
71	*873 72	*893 34	1°019 62	*843 16	*899 83	°056 68	71
72	*854 45	*898 55	°044 10	*822 42	*905 05	°082 64	72
73	*834 75	*903 59	°068 84	*801 15	*910 09	°108 94	73
74	*814 62	*908 45	°093 83	*779 31	*914 96	°135 64	74
75 76 77 78 79	794 °5 773 °5 751 64 729 84 707 66	°913 15 °917 66 °922 00 °926 16 °930 16	119 10 144 61 170 36 196 32	'756 90 '733 92 '710 36 '686 27 '661 59	'919 66 '924 19 '928 54 '932 71 '936 71	162 77 190 28 218 17 246 45 275 13	75 76 77 78 79
80	'685 12	'933 97	'248 85	.636 35	'940 54	304 19	80
81	'662 25	'937 61	'275 36	.610 59	'944 20	333 61	81
82	'639 08	'941 09	'302 01	.584 25	'947 68	363 44	82
83	'615 61	'944 39	'328 78	.557 36	'951 01	393 65	83
84	'591 86	'947 54	'355 68	.529 93	'954 17	424 24	84
85	567 90	'95° 53	382 63	*501 96	'957 18	*455 21	85
86	543 79	'953 33	409 54	*473 53	'960 02	*486 49	86
87	519 49	'956 01	436 52	*444 53	'962 71	*518 18	87
88	495 15	'958 53	463 38	*415 12	'965 26	*550 13	88
89	470 74	'96° 89	490 15	*385 21	'967 66	*582 45	89
90 91 92 93 94	*446 22 *422 02 *397 49 *373 85 *349 50	963 14 965 21 967 20 969 00	516 92 543 19 569 71 595 15 621 25	*354 70 *324 06 *292 48 *261 38 *228 71	°969 93 °972 °5 °974 °7 °975 91 °977 7°	615 22 647 99 681 59 714 53 748 99	90 91 92 93 94
95 96 97 98 99	326 76 302 97 282 67 261 63	'972 29 '973 81 '975 04 '976 28 '977 94	645 53 670 84 692 37 714 65 746 84	197 34 163 79 134 11 102 47	979 29 980 87 982 16 983 44 985 16	*781 96 *817 08 *848 04 *880 97 *929 47	95 96 97 98 99
100	190 51	979 95	.789 44	7·990 82	°987 25	'996 43	100
101	121 77	982 90	.861 13	·87.2 45	°990 32	0'117 87	101
102	000 00	987 17	.987 17	·617 86	°994 64	'376 78	102

 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	10	II	12	13	14	15	16	17	18	19	Dura-
tion.	23.719	23.581	23.440	23.293	23.142	22.986	22.825	22.659	22:490	22:314	tion.
0	.000	'000	,000	.000	.000	.000	'000	000°	000	,000	0
1	.965	.965	.965	'965	.965	.965	.965	·965	.965	.965	1
2	1.896	1.896	1.896	1,896	1.896	1.896	1,892	1.892	1.892	1.892	2
3	2.794	2'794	2'794	2.794	2.794	2.493	2.793	2.793	2'793	2°792	3
4	3.661	3.661	3.001	3.000	3.000	3.000	3.659	3.659	3.628	3.628	4
5	4'497	4°497	4'497	4.496	4.496	4°495	4°494	4°494	4'493	4°492	5
6	5.304	5.303	5'303	5.302	5.302	5.301	5°300	5'299	5.298	5'297	6
7 8	6.082	6°082	6.831	6.830	6.829	6.828	6.826	6°076 6°825	6.823	6.821	7 8
9	7.558	7.556	7.555	7.554	7.552	7.221	7°549	7°547	7.545	7°542	9
	8.256	8.255	8.253	8.521	8.520	8.248	8.245	8.243	8.240	8.237	10
10	8.930	8.928	8.926	8.924	8.922	8.920	8'917.	8.914	8'911	8.907	1
2	9.580	9°578	9.576	9.573	9.571	9.268	9.264	9°56i	9.557	9.553	2
3	10.502	10°204	10,505	10,100	10,199	10,105	10.188	10.184	10,180	10.172	3
4	10.811	10.808	10.802	10.802	10.798	10.794	10'790	10.785	10.780	10.774	4
15	11.394	11°391	11'387	11.383	11'379	11'374	11.369	11.364	11,328	11'351	15
6	11.956	11.025	11.948	11'944	11'939	11.933	11.927	11,051	11'914	11.002	6
7	12.498	12.494	12.489	12.484	12.478	12.472	12.465	12.458	12.450	12.442	7
8	13.050	13.012	13.010	13'004	12.998	13,001	12.983	12'975	12.966	12.957	8
9	13.254	13°518	13.212	13.206	13.499	13,491	13°482	13'473	13.463	13.452	9
20	14.000	14.003	13.996	13.089	13.081	13'972	13.963	13'952	13'941	13'929	20
1	14°476	14°4.70	14°462	14°454	14°445	14.436	14.425	14°413	14.401	14.387	1
2	14'927	14.010	14'911	14°902	14.892	14.882	14.870	14.857	14.843	14.828	2
3	15.361	15.352	15'343	15.333	15.353	15,311	15.598	15.584	15.268	15.51	3
4	15.779	15.770	15.760	15.749	15.737	15.724	15'709	15.694	15.677	15.658	4
25	16,181	16.141	16.160	16.148	16.132	16.151	16.102	16.088	16,060	16.049	25
6	16.260	16.228	16.246	16.232	16.218	16.202	16.485	16.466	16.446	16.424	6
7 8	16'942	16.930	16.916	16'902	16.886	16.869	16.850	16.830	16.808	16.483	7 8
9	17.301	17.631	17.273	17.257	17.240	17.222	17.201	17.179	17°155	17.128	9
30											
1	17.978	17'962	17.945	17.927	17'907	17.885	18.140	17.834	13.111	17.775	30
2	18.604	18.286	18.266	18.242	18.221	18.495	18.466	18.436	18.403	18.367	2
3	18.899	18.879	18.858	18.834	18.800	18.781	18.750	18.418	18.682	18.643	3
4	19.182	19.160	19.137	19,115	19.085	19.055	19.022	18.987	18.948	18.906	4
35	19°453	19°430	19°406	19.378	19°349	19'317	19.282	19.244	19.202	19°157	35
6	19.714	19.689	19.662	19.633	19.602	19.267	19.230	19.489	19.445	19.396	6
7	19.963	19.937	19.908	19.877	19.843	19.807	19.766	19.723	19.675	19.624	7
8	20°203	20°1.74	20'144	20'110	20.074	20.032	19.992	19.945	19.894	19.839	8
9	20°432	20°401	20.369	20.333	20.294	20.22	20°206	20.124	20,103	20°044	9
40	20.621	20.618	20.284	20.246	20.204		20°410	20.357	20,300	20.534	40
1	20.860	20.826	20.789	20'748	20'704		20.604	20.248	20'486	20'420	1
2	21.000	21.024	20'984	20'941	20'894	20.843	20'787	20'728	20.663	20.292	2
3 4	21,33	21,317	21.140	21.124	21.074	51,188 51,050	20.961	20.898	20'829	20.754	3 4
_		21'391	21.347	21,708	21.542		21'125	21.028	20'985	20,000	
45 6	21.221	21.262	21.212	21.463	21.407	21.346	21.580	21,320	21,135	21.048	45 6
7	21'771	21.424	21.674	21.269	21.223	21.495	21,422	21°350	21.397	21,181	7
8	22.075	22.023	21.066	21'905	21.839	21.767	21.689	21.606	21,219	21,418	8
9	22,512	22.190	25,100	22.032	21.066	21.890	21.808	21.720	21.626	21.274	9
		_									
	10	II	12	13	14	15	16	17	18	19	

 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	20	21	22	23	24	25	26	27	28	29	Dura-
tion.	22.132	21.946	21.754	21.557	21.354	21.145	20.931	20.710	20.484	20.251	tion.
0	*000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	•965	*964	*964	*964	964	.964	964	964	964	964	1
2	1.895	1.895	1.894	1.894	1.894	1.894	1.893	1.893	1.893	1.892	2
$\frac{3}{4}$	3.657	2.792 3.657	3.656	3.655	3.654 3.654	2°790 3°654	3.653	2.789 3.652	2.788 3.650	2.787 3.649	3 4
5	4.492	4.491	4.490	4.489	4.487	4.486	4.485	4.483	4.481	4'479	5
6	5.296	5.595	5,53	5.505	5.500	5.588	5.586	5'284	5.581	5'279	6
7	6.041	6.040	6.068	6.066	6.063	6.061	6.028	6.022	6.02	6.049	7
8	6.819	6.817	6.814	6.813	6.809	6.802	6.803	6.798	6.794	6.789	8
9	7.240	7.537	7.534	7.530	7.527	7.523	7.218	7.213	7.208	7.202	9
10	8.234	8.531	8.227	8.553	8.518	8.513	8.207	8.303	8.192	8.188	10
1	8.903	8.899	8.894	8.889	8.884	8.878	8.871	8.864	8.856	8.848	1
2	9.248	9.543	9.238	9.532	9.525	9.218	9.210	9.201	9'492	9*482	2
3.4	10.169	10,163	10.123	10.120	10'142	10'133	10'124	10'114	10.600	10.646	3 4
		•					1	10.703	! -		
15 6	11.343	11.888	11.327	11.317	11.307	11.843	11,850	11.813	11,224	11.778	15 6
7	12'432	12'421	12'410	12.398	12.384	12.369	12.323	12.332	12,316	12.295	7
8	12.046	12'934	12,051	12.007	12.891	12.875	12.856	12.837	12.815	12.791	8
9	13.440	13.426	13'412	13.396	13.379	13.360	13.340	13.317	13.593	13,566	9
20	13.012	13'900	13.884	13.866	13.847	13.826	13.803	13.778	13.751	13.721	20
1	14'372	14.355	14.337	14.318	14.296	14.273	14.247	14.220	14.189	14.157	1
2	14.811	14.793	14.773	14.751	14.727	14.701	14.673	14.643	14.609	14.573	2
3	15'233	15'212	12,131	15'167	15.140	15,115	15.081	15°047	15,010	14.970	3
4	15.638	15.615	15.291	15.262	15.236	15.202	15.471	15.434	15.393	15.349	4
25	16.056	16.005	15.976	15'947	15.915	12.881	15.843	15.803	15.758	15'710	25
6	16.399	16.372	16.944	16.962	16.624	16.240	16.239	16.122	16'107 16'438	16°054 16°381	6 7
8	17.099	17.067	17.033	16.996	16.952	16,911	16.865	16.810	16.753	16.692	8
9	17.427	17.393	17.356	17.315	17.271	17.223	17.171	17.114	17.052	16.986	9
30	17.741	17.703	17.663	17.620	17.572	17.520	17'463	17.402	17:336	17'264	30
1	18.040	18.000	17.957	17.910	17.858	17.802	17.741	17.676	17.604	17.27	1
2	18.327	18.583	18.237	18.189	18.130	18.070	18.002	17.934		17.775	2
3	18.600	18.223	18.203	18.449	18.389	18.324	18.254	18.179	18.099	18.008	3
4	18.860	18,810	18.756	18.698	18.634	18.262	18.490	18*409	18.321		4
35	19.108	19.022	18.997	18.934	18.866	18'792	18.712	18.625 18.828	18°532 18°729	18.431	35
6	19.344	19.286	19°225	19.128	19 004	19'006	19,119	19.018	18.913	18.799	6 7
8	19.779	19'714	19.644	19.268	19.485	19.396	19'299	19,199	19.084	18.963	8
9	19.980	19.910	19.836	19.755	19.667	19.572	19.470	19°360	19°242	19.112	9
40	20'169	20.092	20,019	19.930	19.837	19.737	19.629	19.213	19.388	19.255	40
1	20.348	20'270	20.186	20.092	19.996	19.890	19.776	19.654	19.23	19.385	1
2	20.219	20.433	20.344	20.248	20'144	20.035	19°912	19.784	19.646	19,499	2
3	20.673	20.286	20'492	20.390	20.781	20,163	20'037	19'902	19.758	19.604	3
4	20.820	20.728	20.629	20.22	20.407	20.284	20'152	20'010	19.859	19'699	4
45 6	20.958	20.081	20.756	20.644	20.23	20°394	20.322	20,108	19,921	19.783	45 6
7	21.086	20.984	20.982	20.756	20.630	20.495	20°350	20,196	20,035	19.858	7
8	21,314	21,501	51,081	20.023	20.814	20.667	20'511	20'345	20,169	19,983	8
9	21.414	21.596	21'171	21.034	20.893	20'741	20.578	20.406	20,224	20.033	9
	20	21	22				26	27	28	20	
	20	21	42	23	24	25	20	27	20	29	

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	30	31	32	33	34	35	36	37	38	39	Dura-
tion.	20.013	19.768	19.517	19.261	18.998	18.728	18.453	18.172	17.884	17.591	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	964	'964	'963	'963	'963	'963	1.889	*962	'962	1.886	1
3	1.892	2.786	1.891	2.784	1.890	1.889 2.481	2.780	1.888 2.778	2.777	2.775	3
4	3.648	3.646	3.645	3.643	3.641	3.639	3.637	3.634	3.631	3.628	4
5	4.477	4°475	4.473	4.470	4.467	4.464	4.460	4.457	4.452	4.448	5
6	5'276	5'273	5.269	5.266	5°262	5'257	5.252	5'247	5'241	5.234	6
7	6.042	6.040	6.036	6.031	6.022	6.019	6.013	6.002	5.998	5.989	7
8 9	6.784	6.779	6.773	6.766	6.759	6.751	6.743	6.734	6.723	6.412	8
	7'496	7.489	7.482	7.473	7.464	7.454	7°444 8°116	7°432 8°102	7.419	7.405	9
10	8.838	8.828	8.812	8.152	8·141 8·791	8°129 8°776	8.760	8.743	8.086 8.724	8.069 8.703	10
2	9'470	9°458	9°445	9.430	9'414	9'397	9.378	9.357	9'335	9,310	2
3	10.078	10.063	10.048	10.030	10.013	9.991	9.969	9.945	9.918	9.890	3
4	10.661	10'644	10.626	10.606	10.284	10.260	10°534	10.209	10°476	10.442	4
15	11.551	11'201	11,180	11'157	11.135	11.102	11.072	11.043	11,008	10.069	15
6	11.757	11.735	11.711	11.685	11.657	11.625	11,201	11.554	11.214	11.471	6
7 8	12'272	12°247	12'220	12.673	12.636	12.122	12.084	12.042	11.997	11'947	7
9	12'765	12.737	13.171	13°134	13.033	12.597	13.000	12.506	12.455	12.400	8 9
20	13.689	13.654	13.615	13.573	13.28	13.479	13.425	13.367	13,303	13.532	20
1	14,151	14.081	14.030	13'992	13'942	13.888	13.828	13.764	13.694	13.618	1
2	14.533	14.490	14'443	14°391	14.336	14.276	14.510	14.139	14.063	13.979	2
3	14.926	14.879	14.827	14.771	14.710	14'644	14.272	14.494	14°410	14.319	3
4	15.301	15.549	15.195	15.131	15.064	14.992	14.913	14.829	14.737	14.638	4
25	15.658	15.601	15.239	15.472	15.400	15'321	15°235	15'143	15.044	14.936	25
6 7	16.319	15.935	15.868	15.495	15.416	15.631	15.822	15.438	15.230	15.473	6 7
8	16.624	16.225	16.473	16.387	16.592	19.192	16.088	15'972	15.847	15.713	8
9	16.013	16.832	16.750	16.628	16.229	16.451	16°336	16.511	16.078	15.934	9
30	17.186	17'101	17.010	16.911	16.802	16.690	16.266	16.433	16.290	16.137	30
1	17.443	17.352	17.254	17.148	17.035	16.915	16.480	16.638	16.486	16.353	1
2	17.685	17.588	17.483	17:370	17.249	17.117	16.977	16.826	16.662	16.493	2
3 4	18.124	17.808	17.696	17.766	17.447	17.307	17'158	16.999	16.828 16.976	16.646	3 4
35	18.355	18.204	18.078	17.942	17.797	17.641	17.475	17.298	17,100	16.908	35
6	18.206	18.381	18.248	18.104	17:951	17.787	17.612	17.425	17.228	17.018	6
7	18.676	18.242	18.404	18.252	18.091	17.918	17.735	17.240	17'333	17.114	7
8	18.834	18.695	18.246	18.384	18.518	18.037	17.845	17:641	17.426	17'199	8
9	18.979	18.832	18.676	18.209	18.332		17.942	17.731	17.207	17.272	9
40	10,111	18.957	18.794	18.619	18.434		18.029	17.809	17.577	17.334	40
1 2	19°232	19.071	18.900	18.717	18.525	18.320	18.169	17.876	17.638	17.387	1 2
3	19'439	19173	19.078	18.881	18.674	18.455	18.224	17.983	17.731	17.468	3
4	19.227	19°345	19.123	18.949	18.734	18:509	18.272	18.024	17.766	17.498	4
45	19.605	19°416	19.217	19.007	18:786	18.554	18.311	18.028	17.795	17.521	45
6	19.674	19°479	19.273	19.026	18.830	18.292	18.344	18.086	17.818	17.240	6
7	19'734	19.533	19'321	10,000		18.623	18.370	18.108	17.836	17.555	7
8 9	19'786	19.218	19.362	19.134	18.897	18.649	18.391	18°138	17.850	17.565	8 9
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	30	31	32	33	34	35	36	37	38	39	

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VALUES OF TEMPORARY ANNUITIES OF 1

3 PER

Dura-tion 17:901 16988 16975 16:368 16:060 15:700 15:377 15:001 14:998 14:452	VALUES OF TEMPORALL ANNULIES OF T OCEN							CLITT.				
17:281		40	41	42	43	44	45	46	47	48	49	Dura-
1	tion.	17:291	16.986	16.675	16.358	16.036	15.709	15.377	15.040	14.698	14.352	tion.
2	0	.000					,000	.000		.000	.000	0
8 2:773 2:771 2:768 2:765 2:765 2:757 2:753 2:749 2:745 4 3:625 3:621 3:618 3:613 3:609 3:603 3:598 3:592 3:585 3:585 5 4:443 4:438 4:432 4:425 4:448 4:410 4:402 4:393 4:383 4:372 6 5:227 5:220 5:212 5:202 5:193 5:181 5:170 5:157 5:143 5:128 7 5:980 5:969 5:958 5:946 5:933 5:918 5:903 5:855 5:867 5:846 8 6:700 6:687 6:640 6:621 6:601 6:578 6:555 6:556 9 7:390 7:374 7:355 7:336 7:314 7:291 7:265 7:237 7:208 1 8:050 8:030 8:030 8:030 8:600 8:509 8:534 8:497 8:456 8:412 8:364 2 9:283 9:244 9:223 9:188 9:151 9:110 9:066 9:017 8:965 8:364 2 9:283 9:244 9:223 9:188 9:151 9:110 9:066 9:017 9:8965 8:304 3 9:388 9:824 9:223 9:188 9:151 9:110 9:066 9:017 9:8965 8:304 4 10:406 10:367 10:324 10:277 10:226 10:171 10:112 10:047 9:977 9:901 15 10:927 10:882 10:833 10:779 10:721 10:658 10:597 0:7867 10:7867 10:707 7 11:894 11:836 11:772 11:704 11:630 11:549 11:463 11:369 11:60 8 12:340 12:275 12:204 12:127 12:45 11:955 11:898 11:754 11:642 11:521 20 13:160 13:080 12:933 12:899 12:797 12:687 12:791 12:411 11:988 11:858 3 14:221 14:115 14:000 13:877 13:745 13:622 13:381 13:033 12:287 13:111 12:983 11:881 13:033 12:891 13:568 13:593 14:873 14:416 14:291 14:158 14:051 13:861 13:692 13:734 13:535 13:338 13:794 13:738 13:731 13:489 13:792 13:733 13:738 13:733 13:738					1 -	1 -						1
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5 4'443 4'438 4'432 4'425 5'448 4'410 4'402 4'393 4'383 4'372 6 5'227 5'220 5'213 5'181 5'170 5'157 5'158 5'170 5'158 5'170 5'158 5'170 5'158 5'170 5'158 5'170 5'158 5'170 5'157 5'158 5'170 5'158 5'170 5'158 5'170 5'158 5'170 5'158 5'170 6'153 6'1578 6'1555 6'158 6'1525 6'158 6'1525 6'1528 7'175 6'140 6'141 7'175 7'175 7'175 7'175 7'175 7'175 8'180 7'175 8'141<	_				1 4			1				4
6 5'227 5'220 5'221 5'202 5'193 5'181 5'170 5'157 5'143 5'128 7 5'980 5'968 5'968 5'946 5'933 5'918 5'903 5'885 5'867 5'846 8 6'700 6'687 6'673 6'657 6'640 6'621 6'601 6'578 6'558 6'558 6'558 6'558 6'558 6'528										1		5
7 5-980 5-960 5-958 5-946 5-933 5-918 5-903 5-885 5-867 5-846 8 6-700 6-687 6-673 6-657 6-640 6-621 6-601 6-525 6-555 6-555 6-555 9-7390 7-374 7-355 7-336 7-314 7-291 7-265 7-237 7-208 7-175 7-208 7-2												6
9				5.958	5.946	5.933		5.003				7
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2 9'283 9'254 9'223 9'188 9'151 9'110 9'066 9'047 8'965 8'909 3 9'858 9'824 9'787 9'703 9'055 9'604 9'547 9'487 9'421 4 10'406 10'367 10'324 10'277 10'226 10'171 10'112 10'047 9'977 9'901 15 10'927 10'882 10'833 10'779 10'721 10'658 10'590 10'516 10'437 10'351 6 11'423 11'372 11'316 11'255 11'189 11'117 11'041 10'957 10'867 10'770 7 11'894 11'836 11'772 11'704 11'630 11'549 11'463 11'369 11'269 11'160 8 12'340 12'275 12'204 12'127 12'045 11'955 11'858 11'754 11'642 11'521 9 12'762 12'689 12'611 12'525 12'433 12'334 12'227 12'111 11'988 11'855 13'156 13'080 12'993 12'899 12'797 12'687 12'570 12'443 12'307 12'162 1 13'536 13'447 13'352 13'248 13'137 13'016 12'889 13'792 13'687 13'574 13'452 13'351 13'88 13'730 12'889 13'792 13'687 13'574 13'452 13'351 13'88 13'730 12'869 12'698 3 14'221 14'115 14'200 13'877 13'745 13'602 13'451 13'287 13'141 12'929 4 14'531 14'416 14'291 14'158 14'055 14'405 13'851 13'857 13'353 13'333 25 14'820 14'595 14'810 14'457 14'263 14'098 13'922 13'734 13'353 13'373 3 15'089 14'955 14'810 14'657 14'406 14'313 14'125 13'925 13'731 13'489 7 15'780 15'615 15'440 15'252 15'053 14'841 14'618 14'497 14'247 14'011 13'761 9 15'780 15'615 15'640 15'525 15'053 14'841 14'618 14'497 14'238 14'045 1 16'150 15'965 15'768 15'558 15'533 15'031 14'959 14'4045 14'418 3 16'493 16'471 16'234 15'984 15'150 15'241 15'910 14'181 15'905 15'687 15'458 15'553 15'070 14'819 14'521 14'212 35 16'695 16'471 16'234 15'984 15'959 15'567 15'351 14'989 14'667 14'468 14'472 14'468 14'472 14'618 14'417 16'931 16'644 16'172 15												10
3 9.858 9.824 9.787 9.747 9.703 9.655 9.604 9.547 9.487 9.421 4 10.406 10.307 10.324 10.277 10.226 10.171 10.112 10.047 9.977 9.901 15 10.927 10.882 10.833 10.779 10.721 10.658 10.590 10.516 10.437 10.351 6 11.423 11.372 11.316 11.255 11.189 11.117 11.041 10.957 10.867 10.770 7 11.894 11.836 11.772 11.704 11.630 11.549 11.463 11.369 11.269 11.160 8 12.340 12.275 12.204 12.127 12.045 11.955 11.858 11.754 11.642 11.521 9 12.762 12.689 12.611 12.525 12.433 12.334 13.3536 13.447 13.352 13.248 13.137 13.016 12.888 12.749 12.601 12.442 2 13.889 13.792 13.687 13.574 13.452 13.321 13.181 13.330 12.608 3 14.221 14.115 14.000 13.877 13.745 13.602 13.451 13.287 13.114 12.999 4 14.531 14.4416 14.291 14.155 14.655 14.490 14.313 14.125 13.255 13.335 13.337 6 15.568 15.194 15.039 14.851 14.655 14.490 14.313 14.125 13.255 13.713 13.489 7 15.338 15.194 15.039 14.873 14.655 14.490 14.313 14.125 13.255 13.713 13.489 15.768 15.765 15.404 15.252 15.053 14.841 14.618 14.381 14.133 13.871 30 15.974 15.709 15.612 15.414 15.204 14.980 14.746 14.497 14.238 13.964 1 16.150 15.965 15.768 15.558 15.337 15.103 14.857 14.498 14.408 14.401 14.112 3 16.453 16.248 16.030 15.800 15.800 15.558 15.333 15.037 14.758 14.408 14.401 14.112 3 16.465 16.641 16.386 16.120 15.842 15.750 15.252 15.303 15.037 14.758 14.408 14.101 14.501 14.508 14.201 14.508 14.202 14.408 14.201 14.508 14.202 14.408 14.201 14.508 14.202 14.408 14.201 14.508 14.202 14.408 14.201 14.508 14.202 14.408 14.202 14.408 14.202 14.408 14.202 14.408 14.202 14.408 14.202 14.408 14.202 14.408 1	_											1
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8 14'221 14'115 14'000 13'877 13'745 13'602 13'451 13'287 13'114 12'929 4 14'531 14'416 14'291 14'158 14'015 13'861 13'287 13'114 12'929 25 14'820 14'695 14'561 14'417 14'263 14'08 13'922 13'734 13'535 13'323 6 15'089 14'955 14'810 14'655 14'417 14'263 14'098 13'922 13'734 13'535 13'323 7 15'338 15'944 15'039 14'873 14'697 14'313 14'125 13'925 13'713 13'3489 8 15'568 15'414 15'049 15'752 14'884 14'684 14'472 14'247 14'011 13'761 9 15'780 15'615 15'440 15'252 15'053 14'884 14'746 14'4297 14'238 13'961 1 16'150 15'965 15'768 15'589 15'358 15'303 15'103 14'857 14'461 14'238		0 00										1 2
4 14*531 14*416 14*291 14*158 14*015 13*861 13*677 13*522 13*335 13*137 25 14*820 14*695 14*561 14*17 14*263 14*098 13*922 13*734 13*535 13*323 6 15*089 14*955 14*810 14*655 14*490 14*313 14*125 13*925 13*734 13*535 13*323 8 15*568 15*144 15*249 15*072 14*841 14*647 14*381 14*081 14*313 14*125 13*925 13*713 13*634 9 15*768 15*5414 15*039 14*841 14*508 14*381 14*061 14*427 14*247 14*101 13*761 30 15*974 15*799 15*612 15*414 15*204 14*980 14*746 14*497 14*238 13*361 1 16*150 15*665 15*687 15*687 15*455 15*337 15*165 14*497 14*248 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>_</th><th>,</th><th></th><th>3</th></t<>									_	,		3
25 14.820 14.665 14.561 14.417 14.263 14.988 13.922 13.734 13.535 13.323 6 15.089 14.955 14.810 14.655 14.490 14.313 14.125 13.925 13.713 13.489 7 15.338 15.194 15.039 14.873 14.697 14.508 14.308 14.096 13.721 13.634 8 15.568 15.414 15.249 15.072 14.884 14.684 14.472 14.247 14.011 13.634 30 15.768 15.615 15.440 15.252 15.053 14.841 14.618 14.381 14.133 13.871 30 15.974 15.769 15.612 15.441 15.204 14.980 14.746 14.497 14.238 13.361 1 16.150 15.965 15.768 15.582 15.337 15.733 14.795 14.4598 14.328 14.044 1 16.501 16.366 16.33<				-					-			4
6 15'089 14'955 14'810 14'655 14'490 14'313 14'125 13'925 13'713 13'489 7 15'338 15'194 15'039 14'873 14'697 14'308 14'308 14'096 13'871 13'614 9 15'780 15'615 15'440 15'229 15'072 14'884 14'684 14'472 14'247 14'247 14'133 13'713 13'614 30 15'780 15'615 15'440 15'252 15'053 14'841 14'618 14'381 14'133 13'611 1 16'150 15'965 15'768 15'588 15'333 14'871 14'497 14'497 14'497 14'238 13'3871 3 16'150 15'965 15'768 15'588 15'333 15'031 14'497 14'497 14'248 4 16'531 16'366 16'139 15'869 15'455 15'333 15'031 14'497 14'497 14'497 14'4497 <	25		14.695	14°561		14.263		13'922	13.734			25
8 15:568 15:414 15:249 15:072 14:884 14:684 14:472 14:247 14:011 13:761 9 15:780 15:615 15:440 15:252 15:053 14:841 14:618 14:247 14:011 13:761 30 15:974 15:799 15:612 15:414 15:204 14:980 14:746 14:497 14:238 13:966 1 16:150 15:965 15:768 15:558 15:337 15:103 14:857 14:497 14:238 13:966 2 16:309 16:114 15:907 15:687 15:657 15:303 15:037 14:685 14:404 14:112 3 16:453 16:366 16:39 15:687 15:580 15:383 15:107 14:819 14:521 14:112 35 16:695 16:471 16:234 15:984 15:724 15:455 15:166 14:870 14:564 14:248 4 16:796 16:762 16:316 <th></th> <th>15.089</th> <th></th> <th></th> <th></th> <th>14.490</th> <th></th> <th>14.122</th> <th></th> <th></th> <th></th> <th>6</th>		15.089				14.490		14.122				6
9 15.780 15.615 15.440 15.252 15.053 14.841 14.618 14.381 14.133 13.871 30 15.974 15.799 15.612 15.414 15.204 14.980 14.746 14.497 14.238 13.966 1 16.150 15.965 15.768 15.558 15.337 15.103 14.857 14.598 14.238 13.966 2 16.309 16.114 15.907 15.687 15.455 15.210 14.954 14.685 14.404 14.112 3 16.453 16.248 16.030 15.800 15.558 15.333 15.037 14.788 14.404 14.112 3 16.6581 16.366 16.139 15.984 15.724 15.450 15.166 14.870 14.468 14.167 14.248 4 16.695 16.471 16.234 15.984 15.724 15.450 15.166 14.870 14.564 14.248 16.966 16.562 16.	_											7
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1 16'150 15'965 15'768 15'558 15'337 15'103 14'857 14'598 14'328 14'045 2 16'309 16'114 15'907 15'687 15'455 15'210 14'954 14'685 14'404 14'112 3 16'453 16'248 16'030 15'800 15'558 15'333 15'037 14'819 14'468 14'167 4 16'581 16'366 16'139 15'800 15'589 15'647 15'383 15'107 14'819 14'521 14'1212 35 16'695 16'471 16'234 15'984 15'724 15'450 15'166 14'870 14'564 14'248 6 16'796 16'562 16'316 16'058 15'882 15'506 15'214 14'911 14'598 14'248 8 16'960 16'709 16'446 16'172 15'887 15'520 15'254 14'944 14'625 14'298 17'080 16'814 16'537 16'249 15'952 15'621 15'310 14'989 14'662 1												9
2 16·309 16·114 15·907 15·687 15·455 15·210 14·954 14·685 14·404 14·112 3 16·453 16·248 16·030 15·800 15·558 15·333 15·037 14·758 14·468 14·167 4 16·581 16·366 16·139 15·899 15·647 15·383 15·107 14·819 14·521 14·212 35 16·695 16·471 16·234 15·984 15·724 15·450 15·166 14·870 14·564 14·2248 6 16·796 16·562 16·316 16·058 15·788 15·506 15·166 14·870 14·564 14·248 7 16·884 16·641 16·386 16·120 15·842 15·553 15·214 14·911 14·598 14·248 8 16·960 16·709 16·446 16·172 15·887 15·500 15·214 14·941 14·625 14·298 4 17·126 16·853 16·537 16·249 15·952 15·621 15·310 14·989 14·662 14·335												30
3 16.453 16.248 16.030 15.800 15.558 15.303 15.037 14.758 14.468 14.167 4 16.581 16.366 16.139 15.809 15.647 15.383 15.107 14.819 14.521 14.212 35 16.695 16.471 16.234 15.984 15.724 15.450 15.166 14.870 14.564 14.212 4 16.796 16.562 16.316 16.058 15.788 15.506 15.214 14.911 14.598 14.248 7 16.884 16.641 16.386 16.120 15.842 15.553 15.254 14.941 14.625 14.298 8 16.960 16.709 16.446 16.172 15.887 15.500 15.224 14.944 14.625 14.298 40 17.080 16.814 16.537 16.249 15.952 15.644 15.329 15.005 14.682 14.341 2 17.164 16.886 16.557 </th <th></th> <th>1 2</th>												1 2
4 16·581 16·366 16·139 15·899 15·647 15·383 15·107 14·819 14·521 14·212 35 16·695 16·471 16·234 15·984 15·724 15·383 15·107 14·819 14·521 14·212 6 16·796 16·562 16·316 16·058 15·724 15·360 15·166 14·870 14·564 14·248 7 16·884 16·641 16·386 16·120 15·842 15·553 15·214 14·911 14·598 14·248 8 16·960 16·709 16·446 16·172 15·887 15·553 15·254 14·944 14·625 14·298 40 17·080 16·814 16·537 16·249 15·952 15·644 15·329 15·005 14·673 14·335 1 17·126 16·886 16·570 16·249 15·952 15·644 15·329 15·005 14·673 14·341 2 17·104 16·886 16·570 </th <th>_</th> <th></th> <th>3</th>	_											3
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6 16·796 16:562 16:316 16·058 15·788 15·506 15·214 14·911 14·598 14·276 7 16·884 16·641 16·386 16·120 15·842 15·553 15·254 14·944 14·625 14·298 8 16·960 16·709 16·446 16·172 15·887 15·590 15·285 14·970 14·646 14·314 9 17·025 16·766 16·496 16·214 15·923 15·621 15·310 14·989 14·662 14·326 40 17·080 16·814 16·537 16·249 15·952 15·644 15·329 15·005 14·682 14·341 2 17·164 16·886 16·597 16·299 15·992 15·644 15·329 15·005 14·682 14·341 3 17·195 16·911 16·618 16·316 16·006 15·644 15·362 15·024 14·688 14·348 4 17·239 16·931 16·647 <th>35</th> <th></th> <th>16.471</th> <th></th> <th>15.984</th> <th>15.724</th> <th>15.450</th> <th>15.166</th> <th>14.870</th> <th>14.264</th> <th>14.248</th> <th>35</th>	35		16.471		15.984	15.724	15.450	15.166	14.870	14.264	14.248	35
8 16·960 16·709 16·446 16·172 15·887 15·590 15·285 14·970 14·646 14·314 9 17·025 16·766 16·496 16·214 15·923 15·591 15·285 14·970 14·646 14·314 40 17·080 16·814 16·537 16·249 15·952 15·644 15·329 15·005 14·673 14·335 1 17·126 16·883 16·570 16·277 15·975 15·663 15·344 15·016 14·682 14·341 2 17·164 16·886 16·597 16·299 15·992 15·663 15·344 15·024 14·688 14·344 4 17·195 16·911 16·618 16·316 16·006 15·667 15·367 15·362 15·029 14·692 14·692 14·348 4 17·239 16·947 16·634 16·338 16·023 15·694 15·367 15·033 14·697 14·351 4 17·254 16·959 16·656 16·345 16·028 15·703 15·373 15·037<							15.209	15.514	14.911		-	6
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1 17.126 16.853 16.570 16.277 15.975 15.663 15.344 15.016 14.682 14.341 2 17.164 16.886 16.597 16.299 15.992 15.677 15.354 15.024 14.688 14.345 3 17.195 16.911 16.618 16.316 16.006 15.687 15.362 15.029 14.692 14.348 4 17.219 16.931 16.647 16.338 16.028 15.694 15.367 15.033 14.694 14.350 45 17.239 16.947 16.656 16.345 16.028 15.703 15.371 15.035 14.696 14.351 6 17.254 16.968 16.662 16.350 16.031 15.705 15.375 15.039 14.697 14.352 8 17.273 16.974 16.667 16.353 16.033 15.707 15.376 15.039 14.698 14.352 9 17.273 16.978 16.670 16.355 16.035 15.707 15.376 15.039 14.698 14.352<				_		_						-
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7 17·265 16·968 16·662 16·350 16·031 15·705 15·375 15·038 14·697 14·352 8 17·273 16·978 16·667 16·353 16·033 15·707 15·376 15·039 14·698 14·352 9 17·279 16·978 16·670 16·355 16·035 15·707 15·376 15·039 14·698 14·352												45
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OM(5) VALUES OF TEMPORARY ANNUITIES OF 1

District 14-002 13-648 13-291 12-931 12-569 12-204 11-838 11-470 11-10 O	944 1.835 2.672 3.457 4.192 4.877 5.515 6.105 6.650	Duration. 0 1 2 3 4 5 6 7
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3 2'740 2'734 2'729 2'723 2'716 2'708 2'700 2'692 2'682 4 3'570 3'561 3'552 3'541 3'530 3'518 3'504 3'490 3'47 5 4'360 4'347 4'333 4'317 4'300 4'282 4'262 4'241 4'21 6'5111 5'093 5'073 5'051 5'028 5'003 4'975 4'945 4'91 7 5'824 5'799 5'773 5'745 5'714 5'680 6'269 6'219 6'16 6'269 6'219 6'16 6'269 6'219 6'16 6'29 6'729 6'729 6'729 6'729 6'729 6'729 6'729 6'729 6'729 6'729 7'739 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'305 7'739 7'305 7'305	2.672 3.457 4.192 4.877 5.515 6.105 6.650	3 4 5 6 7
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5 4'360 4'347 4'333 4'317 4'300 4'282 4'262 4'241 4'21 6 5'111 5'093 5'073 5'051 5'028 5'003 4'975 4'945 4'91 7 5'824 5'799 5'773 5'745 5'714 5'680 5'643 5'604 6'910 6'852 6'790 6'720 7'230 7'465 7'395 7'320 <t< th=""><th>4'192 4'877 5'515 6'105 6'650</th><th>5 6 7</th></t<>	4'192 4'877 5'515 6'105 6'650	5 6 7
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7 5.824 5.799 5.773 5.745 5.714 5.680 5.643 5.604 6.168 8 6.500 6.468 6.435 6.398 6.359 6.316 6.269 6.219 6.16 9 7.139 7.100 7.058 7.013 6.964 6.910 6.852 6.790 6.72 10 7.743 7.696 7.645 7.590 7.530 7.465 7.395 7.320 7.23 1 8.312 8.256 8.195 8.129 8.058 7.981 7.898 7.809 7.71 2 8.847 8.781 8.710 8.632 8.549 8.459 8.362 8.259 8.14 3 9.349 9.272 9.190 9.100 9.004 8.900 8.789 8.670 8.54 4 9.819 9.731 9.636 9.534 9.810 9.677 9.535 9.384 9.22 6 10.665 10.552 10.432 10.302 10.163 10.015 9.857 9.689 9.51	6.650 6.102 6.212	7
8 6·500 6·468 6·435 6·398 6·359 6·316 6·269 6·219 6·16 9 7·139 7·100 7·058 7·013 6·964 6·910 6·852 6·790 6·72 10 7·743 7·696 7·645 7·590 7·530 7·465 7·395 7·320 7·23 1 8·312 8·256 8·195 8·129 8·058 7·981 7·898 7·809 7·71 2 8·847 8·781 8·710 8·632 8·549 8·459 8·362 8·259 8·14 3 9·349 9·272 9·190 9·100 9·004 8·900 8·789 8·670 8·54 4 9·819 9·731 9·636 9·534 9·424 9·306 9·179 9·045 8·90 15 10·258 10·157 10·050 9·934 9·810 9·677 9·535 9·384 9·22 5 11·043 10·917 <th< th=""><th>6.620</th><th></th></th<>	6.620	
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20 12'005 11'839 11'661 11'473 11'273 11'062 10'838 10'604 10'35 11'272 12'092 11'900 11'696 11'481 11'254 11'015 10'765 10'50 12'13 11'895 11'665 11'423 11'168 10'904 10'62 12'732 12'523 12'302 12'070 11'825 11'568 11'300 11'021 10'73 12'926 12'704 12'469 12'222 11'963 11'693 11'411 11'118 10'81 13'351 13'002 12'741 12'467 12'182 11'887 11'580 11'265 10'94 10'88 13'499 13'225 12'940 12'643 12'336 12'019 11'692 11'317 10'98 13'598 13'313 13'016 12'709 12'392 12'066 11'732 11'391 11'04 11'317 10'98 13'598 13'346 13'131 12'806 12'473 12'104 11'762 11'415 11'06 11'373 13'46 13'131 12'806 12'473 12'132 11'785 11'415 11'06 11'445 11'08 11'4	9.947	9
1 12·2·72 12·092 11·900 11·696 11·481 11·2·54 11·015 10·765 10·506 2 12·514 12·319 12·113 11·895 11·665 11·423 11·168 10·904 10·62 3 12·732 12·523 12·302 12·070 11·825 11·568 11·300 11·021 10·73 4 12·926 12·704 12·469 12·222 11·963 11·693 ·11·411 11·118 10·81 25 13·099 12·863 12·615 12·354 12·082 11·798 11·503 11·199 10·88 6 13·251 13·002 12·741 12·467 12·182 11·887 11·580 11·265 10·94 7 13·384 13·122 12·849 12·563 12·267 11·960 11·642 11·317 10·98 8 13·499 13·225 12·940 12·643 12·336 12·019 11·692 11·359 11·01 9 13·598 13·313 13·016 12·709 12·392 12·066 11·732 11·391 11·04 13·751 13·446 13·131 12·806 12·473 12·132 11·785 11·415 11·06 1 13·751 13·446 13·131 12·806 12·473 12·132 11·785 11·445 11·08 2 13·808 13·495 13·172 12·849 12·500 12·154 11·801 11·445 11·08 3 11·014 11·180 11·445 11·08 3 11·014 11·180 11·445 11·08 3 11·014 11·180 11·445 11·08 3 11·014 11·180 11·445 11·08 3 11·014 11·180 11·445 11·08 3 11·014 11·180 11·445 11·08 4 11·015 10·765 10·506 10·107 10·107 5 11·014 11·108 11·445 11·08 5 11·014 11·108 11·445 11·08 5 11·014 11·180 11·445 11·08 5 11·195 11·		20
2 12.514 12.319 12.113 11.895 11.665 11.423 11.168 10.904 10.62 3 12.732 12.523 12.302 12.070 11.825 11.568 11.300 11.021 10.73 4 12.926 12.704 12.469 12.222 11.963 11.693 .11.411 11.118 10.81 25 13.099 12.863 12.615 12.354 12.082 11.798 11.503 11.199 10.88 6 13.251 13.002 12.741 12.467 12.182 11.887 11.580 11.265 10.94 7 13.384 13.122 12.849 12.563 12.267 11.960 11.642 11.317 10.98 8 13.499 13.225 12.940 12.643 12.336 12.019 11.692 11.359 11.01 9 13.681 13.385 13.080 12.763 12.437 12.104 11.762 11.415 11.06 1 13.751 13.446 13.131 12.866 12.437 12.104		1
3 12.732 12.523 12.302 12.070 11.825 11.568 11.300 11.021 10.73 4 12.926 12.704 12.469 12.222 11.963 11.693 .11.411 11.118 10.81 25 13.099 12.863 12.615 12.354 12.082 11.798 11.580 11.199 10.88 6 13.251 13.002 12.741 12.467 12.182 11.887 11.580 11.265 10.94 7 13.384 13.122 12.849 12.563 12.267 11.960 11.642 11.317 10.98 8 13.499 13.225 12.940 12.643 12.336 12.019 11.692 11.359 11.01 9 13.681 13.385 13.080 12.763 12.437 12.104 11.762 11.415 11.06 1 13.751 13.446 13.131 12.866 12.437 12.104 11.785 11.425 11.425 11.06 1 13.780 13.495 13.172 12.840 12.500		2
4 12'926 12'704 12'469 12'222 11'963 11'693 11'411 11'118 10'81 25 13'099 12'863 12'615 12'354 12'082 11'798 11'503 11'199 10'88 6 13'251 13'002 12'741 12'467 12'182 11'887 11'580 11'265 10'94 7 13'384 13'122 12'849 12'563 12'267 11'960 11'642 11'317 10'98 8 13'499 13'225 12'940 12'643 12'392 12'066 11'692 11'359 11'09 9 13'681 13'385 13'080 12'763 12'437 12'104 11'762 11'415 11'06 1 13'751 13'446 13'131 12'866 12'473 12'132 11'785 11'415 11'06 2 13'808 13'495 13'172 12'840 12'500 12'154 11'801 11'445 11'06		3
25 13°099 12°863 12°615 12°354 12°082 11°798 11°503 11°199 10°88 13°251 13°002 12°741 12°467 12°182 11°887 11°580 11°265 10°94 13°384 13°122 12°849 12°563 12°267 11°960 11°642 11°317 10°98 13°499 13°225 12°940 12°643 12°336 12°019 11°692 11°359 11°019 13°598 13°313 13°016 12°709 12°392 12°066 11°732 11°391 11°04 11°762 11°415 11°06 11°473 13°466 13°131 12°806 12°473 12°132 11°785 11°432 11°0788 13°808 13°495 13°172 12°840 12°500 12°154 11°801 11°445 11°08 11°08 11°08 11°09		
6 13'251 13'002 12'741 12'467 12'182 11'887 11'580 11'265 10'94 7 13'384 13'122 12'849 12'563 12'267 11'960 11'642 11'317 10'98 8 13'499 13'225 12'940 12'643 12'336 12'019 11'692 11'359 11'01 9 13'598 13'313 13'016 12'709 12'392 12'066 11'732 11'391 11'04 1 13'751 13'446 13'131 12'806 12'473 12'132 11'785 11'415 11'06 1 13'808 13'495 13'172 12'840 12'500 12'154 11'801 11'445 11'08 2 13'808 13'495 13'172 12'840 12'500 12'154 11'801 11'445 11'08	10.262	25
7 13-384 13-122 12-849 12-563 12-267 11-960 11-642 11-317 10-98 13-499 13-225 12-940 12-643 12-336 12-019 11-692 11-359 11-019 13-598 13-313 13-016 12-709 12-392 12-066 11-732 11-391 11-04 11-762 11-415 11-06 13-751 13-446 13-131 12-806 12-473 12-132 11-785 11-432 11-078 13-388 13-495 13-172 12-840 12-500 12-154 11-801 11-445 11-08 11-445 11-4		
8 13'499 13'225 12'940 12'643 12'336 12'019 11'692 11'359 11'359 9 13'598 13'313 13'016 12'709 12'392 12'066 11'732 11'391 11'06 1 13'751 13'446 13'131 12'806 12'473 12'132 11'762 11'415 11'06 2 13'808 13'495 13'172 12'840 12'500 12'154 11'801 11'445 11'08	10.644	
9 13'598 13'313 13'016 12'709 12'392 12'066 11'732 11'391 11'06 1 13'751 13'446 13'131 12'806 12'473 12'132 11'785 11'415 11'06 2 13'808 13'495 13'172 12'840 12'500 12'154 11'801 11'445 11'08	10.671	8
30 13.681 13.385 13.080 12.763 12.437 12.104 11.762 11.415 11.06 1 13.751 13.446 13.131 12.806 12.473 12.132 11.785 11.432 11.07 2 13.808 13.495 13.172 12.840 12.500 12.154 11.801 11.445 11.08	10.690	9
1 13'751 13'446 13'131 12'806 12'473 12'132 11'785 11'432 11'08 2 13'808 13'495 13'172 12'840 12'500 12'154 11'801 11'445 11'08	10.705	30
2 13.808 13.495 13.172 12.840 12.200 12.124 11.801 11.445 11.08	10.715	1
	10.721	2
0 113 033 13 334 13 204 12 000 12 32 12 27	10.726	3
4 13.893 13.265 13.229 12.886 12.236 12.185 11.825 11.460 11.00	10.729	4
35 13.922 13.288 13.548 15.000 15.244 15.100 11.858 11.464 11.00	10.430	35
8 13.042 13.606 13.565 15.011 15.222 15.102 11.835 11.464 11.10	10.731	6
7 13.962 13.620 13.572 15.918 15.260 15.160 11.834 11.468 11.16	10.732	7
8 13.075 13.620 13.270 12.923 12.204 12.201 11.836 11.469 11.10		8
9 13.084 13.636 13.583 15.056 15.266 15.505 11.836 11.440 11.10	10.435	9
40 13.990 13.640 13.586 15.658 15.264 15.503 11.834 11.440 11.10	10.732	40
1 13.995 13.643 13.588 15.930 15.268 15.504 11.837 11.470 11.10	10.732	
2 13.997 13.642 13.590 15.930 15.268 15.504 11.837 11.470 11.10	1	_
3 13.999 13.646 13.500 15.631 15.268 15.504 11.834 11.440 11.10		3
4 14.000 13.644 13.501 15.031 15.204 11.834 11.440 11.10	59	
45 14.001 13.647 13.291 12.931 12.269 12.204 11.837 11.470 58		
6 14.001 13.648 13.591 15.931 15.269 15.504 11.838 57	50	
7 14.002 13.648 13.291 12.931 12.269 12.204 51	14.002	
8 14.005 13.648 13.591 15.931 15.269 52 13.64	14.002	52
9 14.005 13.648 13.591 15.931 13.64		1
13.501		
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50 51 52 53 54 55 56 52 51	50	

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VALUES OF TEMPORARY ANNUITIES OF 1

3 PER

Dur	60	61	62	63	64	65	66	67	68	69	CENT.
tion		9.996	9.629	9.265	8.902	8.542	8.187	7.834	7.487	7.144	Dura- tion.
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1 1							927	923	.919	915	1
2	-				t					1.748	2
									2.256		3
4	0 10	_	1	1					3,550	3,185	4
1 5										3.789	5
9.				4.705	4.653				4°402	4.328	6
1 7	1 5 . 5			5.821		5.148			4.898	4.803	7
					6.199				5°335	5.518	8
10				6.735	6.613			1		5.884	9
				7.153	6.981	6.830	6.672		6.328	6.144	10
				7.467	7.305		6:954		6.264	6.362	2
9		8.107			7.588	7°396			6.768	6.242	3
4	8.283	8.410		8.032	7.833	7.621	7.400		6.933	6.688	4
15				8.264	8.042	7.811	7.571	7.323	7.067	6.805	15
E	-	1		8.460	8.550	7.970	7.713	7.447	7'174	6.897	6
7	1 201		8.875	8.626	8.368	8.103	7.827	7.546	7.259	6.967	7
8	1 200		9,031	8.765	8.491		7.919	7.624	7.324	7'021	8
8	7 70		9,161	8.880	8.291	8.294		7.684	7°373	7.001	9
20			9.268	8.973	8.670	8.361	8.047	7.730	7.410	7.089	20
1			9.356	9.048	8.733	8.413	8.089	7.763	7.436	7,100	1
3		9°739 9°805	9°426 9°481	9.106	8.781	8.452 8.481	8°120	7.787	7.454	7.122	2
4		9.856	9.523	9,186	8.845	8.202	8.128	7.816	7.466	7.131	3 4
25		9.896	9.555	9,311	8.864	8.216	8.160	7.823	7°475	7'137	
6		9.926	9°579	9°229	8:878	8.526	8.176	7.828	7.483	7.140	25 6
7		9.949	9.596	9.242	8.887	8.533	8.181	7.831	7.485	7.143	7
8	10.350	9.965	9.608	9°250	8.893	8.537	8.183	7.833	7.486	7'144	8
8	1 000	9.976	9.919	9°256	8.897	8.239	8.182	7.834	7.486	7.144	9
30		9'983	9.621	9.260	8.899	8.541	8.189	7.834	7.487	7.144	30
1		9.988	9.625	9.262	8.901	8.542	8,186	7.834	7.487	7.144	1
2		9'992	9.627	9.263	8.901	8.242	8.186	7.834	7.487	7.144	2
3 4		9.993	9.628	9°264	8.902 8.902	8.242	8.186	7 ^{.8} 34 7 ^{.8} 34	7.487	7.144	3
	10,363	9.995	9.629	9'264	8.902	8.542		7.834	7.487	69	
35		9.995	9.629	9'264	8.902	8·542 8·542	8.187	67	68	40	
7	10.364	9,996	9.629	9.265	8.902	8.242	66		41		
8	10.364	9.996	9.629	9.265	8.902	65		42	16.986	17.291	
9	10.364	9.996	9.629	9.265	64		43	16.675		17.291	62
40	10.364	9.996	9.629	63	4-	44	16.358		16.986	17.291	1
1	10.364	9.996	62	46	45	16.036		16.675	16.986	17.291	60
2	1 .	61	47	40	15.709	16.036	16.328	16.675	16.086	17.291	59
	60	48		15.377	15.709	16.036	16.328	16.675	16.086	17.291	8 7
	49		15.040	15'377	15.409	16.036	16.328	16.675	16.986	17.291	6
		14.698	15.040	15.377	15.709	16.036	16.328	16.675	16.986	17'291	5
	14.352	14.698	15.039	15'377	15.709	16.036	16.328	16.675	16.985	17.290	54
53	14.352	14.698	15.039	15.377	15.409	16.036	16.328	16.674	16.982	17'290	3
2	14.325	14.698	15.039	15.377	15'708	16.039	16.328	16.674	16.984	17.288	2
50	14.352	14.698	15.039	15'377	15.708	16.036	16.357	16.673	16.983	17.286	1
-30	14.325	14.698	15.039	15.377	15.708	16.032	16.326	16.672	16.981	17.284	50
	49	48	47	46	45	44	43	42	41	40	
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VALUES OF TEMPORARY ANNUITIES OF 1

	Dura-	70	71	72	73	74	75	76	77	78	79	Dura-
1		6.808	6.477	6.152	5.835	5.526	5.224	4.930	4.645	4.368	4.101	tion.
2	0	,000	.000	.000	.000						000	0
8	_		_				_				.847	1
4 3"141 3"097 3"049 2"998 2"944 2"886 2"824 2"758 2"689 5 3"739 3"667 3"599 3"527 3"450 3"369 3"282 3"191 3"096 6 4"249 4"164 4"575 3"4879 3"879 3"772 3"617 3"544 3"421 7 4"702 4"595 4"482 4"683 4"537 4"106 3"968 3"825 3"677 8 5"094 4"964 4"827 4"683 4"537 4"106 3"968 4"4024 10 5"715 5"538 5"354 5"163 4"966 4"764 4"557 4"347 4"213 1 5"538 5"547 5"335 5"117 4"895 4"670 4"442 4"213 2 6"149 5"029 5"702 5"470 5"322 5"668 4"813 4"559 4"511 4"203 4 6"436 6"179 5"918		1.735			1						1.222	2
5 3.730 3.667 3.599 3.527 3.450 3.369 3.282 3.191 3.966 6 4.740 4.164 4.7575 3.979 3.879 3.772 3.661 3.544 3.421 7 4.702 4.963 4.482 4.683 4.533 4.377 4.214 4.047 3.875 9 5.430 5.276 5.115 4.948 4.773 4.593 4.408 4.218 4.024 10 5.753 5.5547 5.354 5.163 4.966 4.764 4.557 4.347 4.134 1 5.753 5.7547 5.335 5.117 4.895 4.670 4.442 4.223 2 6.149 5.929 5.702 5.470 5.234 4.995 4.753 4.511 4.226 3 6.366 6.069 5.824 5.755 5.322 5.068 4.813 4.559 4.361 4 6.436 6.140 6.028											2,130	3
66										1	2.612	4
7 4'702 4'595 4'482 4'363 4'237 4'106 3'968 3'825 3'677 8 5'5094 4'964 4'827 4'683 4'537 4'214 4'047 3'875 9 5'430 5'276 5'115 4'948 4'773 4'214 4'047 3'875 10 5'715 5'538 5'354 5'363 5'163 4'966 4'764 4'557 4'347 4'134 1 5'953 5'753 5'547 5'335 5'117 4'895 4'753 4'511 4'269 3 6'368 6'669 5'824 5'575 5'322 5'668 4'813 4'559 4'366 4 6'436 6'179 5'918 5'653 5'387 5'121 4'855 4'591 4'361 6 6'614 6'328 6'041 5'783 5'469 5'122 4'924 4'626 4'356 7 6'673 6'376 6'675									1 -		2.995	5
8 5'094 4'964 4'827 4'683 4'533 4'377 4'214 4'047 3'875 9 5'430 5'276 5'115 4'948 4'773 4'593 4'408 4'213 10 5'715 5'538 5'354 5'163 4'966 4'764 4'557 4'347 4'134 1 5'953 5'753 5'547 5'335 5'117 4'895 4'676 4'442 4'213 2 6'149 5'929 5'702 5'476 5'234 4'995 4'753 4'511 4'263 4 6'436 6'179 5'918 5'653 5'387 5'121 4'855 4'591 4'361 6 6'644 6'328 6'041 5'753 5'467 5'122 4'883 4'612 4'347 6 6'146 6'123 5'803 5'504 5'209 4'914 4'634 4'362 7 6'746 6'450 6'135 5'824 <										1	3°294	6
9						1			-		3.525	7
10								1		1	3.699	8 9
1 5°953 5°753 5°547 5°335 5°117 4°895 4°676 4°442 4°213 2 6°149 5°929 5°702 5°476 5°234 4°995 4°753 4°561 3 6°308 6°069 5°824 5°575 5°322 5°068 4°833 4°511 4°269 4 6°436 6°179 5°918 5°653 5°387 5°121 4°855 4°591 4°331 15 6°537 6°264 5°989 5°712 5°434 5°157 4°855 4°591 4°331 16 6°614 6°328 6°041 5°753 5°467 5°182 4°902 4°626 4°356 7 6°673 6°376 6°079 5°783 5°467 5°182 4°902 4°626 4°356 7 6°673 6°376 6°079 5°783 5°467 5°182 4°902 4°626 4°356 8 6°716 6°410 6°105 5°803 5°504 5°209 4°921 4°639 4°365 9 6°747 6°434 6°123 5°816 5°513 5°210 4°927 4°643 4°368 1 6°783 6°466 6°142 5°832 5°524 5°222 4°929 4°644 4°368 2 6°793 6°467 6°149 5°834 5°525 5°223 4°930 4°645 4°368 3 6°796 6°472 6°149 5°834 5°525 5°223 4°930 4°645 4°368 4 6°803 6°474 6°151 5°834 5°525 5°223 4°930 4°645 4°368 4 6°803 6°476 6°152 5°835 5°526 5°224 4°930 4°645 4°368 4 6°808 6°477 6°152 5°835 5°526 5°224 4°930 4°645 4°368 5 6°806 6°476 6°152 5°835 5°526 5°224 4°930 4°645 4°368 5 6°806 6°476 6°152 5°835 5°526 5°224 4°930 4°645 4°368 5 6°806 6°476 6°152 5°835 5°526 5°224 4°930 4°645 4°368 5 6°807 6°476 6°152 5°835 5°526 5°224 4°930 4°645 4°368 5 6°808 6°477 6°152 5°835 5°526 5°224 4°930 4°645 4°368 7	_				f .	_						_
2											3,982	10
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4	_	6.308							_		4.029	3
15		6.436			5.653						4.076	4
6 6 6·614 6·328 6·041 5·753 5·467 5·182 4·902 4·626 4·356 7 6·673 6·376 6·376 6·376 5·783 5·489 5·199 4·914 4·634 4·362 8 6·716 6·410 6·105 5·803 5·504 5·209 4·914 4·634 4·365 9 6·747 6·434 6·123 5·816 5·513 5·216 4·925 4·642 4·367 20 6·769 6·455 6·135 5·824 5·519 5·219 4·927 4·643 4·368 1 6·783 6·461 6·142 5·829 5·522 5·222 4·929 4·644 4·368 2 6·793 6·467 6·147 5·832 5·524 5·223 4·929 4·644 4·368 3 6·799 6·472 6·149 5·834 5·525 5·223 4·929 4·644 4·368 3 6·799 6·472 6·149 5·834 5·525 5·223 4·930 4·645 4·368 2 6·805 6·474 6·151 5·834 5·525 5·223 4·930 4·645 4·368 2 6·805 6·476 6·152 5·835 5·526 5·224 4·930 4·645 4·368 2 6·805 6·476 6·152 5·835 5·526 5·224 4·930 4·645 4·368 2 6·806 6·476 6·152 5·835 5·526 5·224 4·930 4·645 8·368 2 6·806 6·476 6·152 5·835 5·526 5·224 4·930 4·645 8·368 2 6·806 6·476 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·808 6·477 6·152 5·835 5·526 5·224 4·930 6·9517 19·768 2 17·581 17·584 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 17·591 17·884 18·171 18·453 18·728 18·998 19·260 19·517 19·767 2 17·590 17·884 18·171 18·453 18·728 18·999 19·259 19·515 19·765 2 17·590 17·884 18·171 18·453 18·728 18·997 19·258 19·514 19·763 2 17·590 17·884 18·171 18·453 18·728 18·997 19·258 19·514 19·763 2 17·590 17·884 18·171 18·453 18·728 18·999 19·257 19·512 19·765 2 17·590 17·884 18·171 18·453 18·728 18·999 19·257 19·512 19·765 2 17·590 17·884 18·171 18·453 18·728 18·999 19·257 19·512 19·765 2 17·590 17·884 18·171 18·453 18·728 18·999 19·257 19·512 19·765 2 17·590 17·884 18·171 18·453 18·728 18·999 19·257 19·512 19	_							1			4.087	15
7 6·673 6·376 6·079 5·783 5·489 5·199 4·914 4·634 4·362 8 6·16 6·410 6·105 5·803 5·504 5·209 4·921 4·639 4·365 9 6·747 6·434 6·123 5·816 5·513 5·216 4·925 4·643 4·367 20 6·769 6·450 6·135 5·824 5·519 5·219 4·927 4·643 4·368 2 6·793 6·467 6·147 5·829 5·5224 5·223 4·929 4·644 4·368 2 6·793 6·467 6·147 5·834 5·525 5·223 4·929 4·644 4·368 2 6·806 6·474 6·151 5·834 5·525 5·223 4·930 4·645 4·368 2 6·806 6·476 6·152 5·835 5·526 5·224 4·930 4·645 4·368 3 7 6·806 6·477 6·152 5·835 5·526 5·224 4·930 7								,			4'094	6
8 6-716 6-410 6-105 5-803 5-504 5-209 4-921 4-639 4-365 9 6-747 6-434 6-123 5-816 5-513 5-216 4-925 4-642 4-367 20 6-769 6-450 6-132 5-824 5-519 5-219 4-927 4-643 4-368 1 6-783 6-461 6-142 5-829 5-522 5-222 2-922 4-644 4-368 2 6-793 6-467 6-147 5-832 5-524 5-223 4-930 4-644 4-368 3 6-799 6-472 6-149 5-834 5-525 5-223 4-930 4-645 4-368 4 6-803 6-475 6-152 5-835 5-525 5-223 4-930 4-645 4-368 2 6-806 6-476 6-152 5-835 5-526 5-224 76 3 6-808 6-477 6-152 5-835	_							1			4'097	7
9						-					4.099	8
20	9	6.747					-				4.100	9
1 6.783 6.461 6.142 5.829 5.522 5.222 4.929 4.644 4.368 2 6.793 6.467 6.147 5.832 5.524 5.223 4.929 4.644 4.368 3 6.799 6.472 6.149 5.834 5.525 5.223 4.930 4.645 4.368 4 6.803 6.474 6.151 5.835 5.525 5.223 4.930 4.645 4.368 25 6.806 6.476 6.152 5.835 5.526 5.224 4.930 4.645 78 6 6.806 6.476 6.152 5.835 5.526 5.224 4.930 4.645 78 7 6.807 6.476 6.152 5.835 5.526 5.224 4.930 77 1 6.808 6.477 6.152 5.835 5.526 72 76 32 1 1.7.591 1.7.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 19.768 1 <td< th=""><th>20</th><td>6.769</td><td></td><td>6.132</td><td>5.824</td><td></td><td>5'219</td><td></td><td>1</td><td></td><td>4.101</td><td>20</td></td<>	20	6.769		6.132	5.824		5'219		1		4.101	20
2 6.793 6.467 6.147 5.832 5.524 5.223 4.929 4.644 4.368 4.368 4.683 6.474 6.151 5.834 5.525 5.223 4.930 4.645 4.368 2.5 6.805 6.475 6.152 5.835 5.525 5.224 4.930 4.645 4.368 2.5 6.806 6.476 6.152 5.835 5.526 5.224 4.930 4.645 7.8 7.6 6.806 6.476 6.152 5.835 5.526 5.224 4.930 4.645 7.8 7.6 6.806 6.476 6.152 5.835 5.526 5.224 4.930 4.645 7.8 7.6 6.806 6.477 6.152 5.835 5.526 5.224 4.930 7.7 7.5 7.5 8.8 6.807 6.477 6.152 5.835 5.526 5.224 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8 7.8		6.783		6.142	5.829						4.101	1
3 6.799 6.472 6.149 5.834 5.525 5.223 4.930 4.645 4.368 4 6.803 6.474 6.151 5.834 5.525 5.223 4.930 4.645 4.368 25 6.805 6.476 6.152 5.835 5.525 5.224 4.930 4.645 78 7 6.806 6.476 6.152 5.835 5.526 5.224 4.930 4.645 78 8 6.807 6.476 6.152 5.835 5.526 75 76 32 9 6.808 6.477 6.152 5.835 5.526 75 33 19.517 19.768 2 1 6.808 6.477 72 36 18.453 18.728 18.998 19.260 19.517 19.768 2 1 1.7591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 1.7591	2	6.793	6.467		5.832				4.644		4.101	2
25	3		6.472				5.223				4'101	3
6 6.806 6.476 6.152 5.835 5.526 5.224 4.930 77 7 6.807 6.476 6.152 5.835 5.526 5.224 78 32 19.517 19.768 2 9 6.808 6.477 6.152 5.835 74 78 33 19.517 19.768 2 1 6.808 6.477 72 36 18.453 18.728 18.998 19.260 19.517 19.768 2 2 6.808 71 38 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 2 17.591 17.884 18.172 18.453 <	4		6.474		5.834	5.25	5.553	4.930	4.645	4.368	79	
7 6.807 6.476 6.152 5.835 5.526 5.224 76 32 19.768 29.6808 6.477 6.152 5.835 5.526 74 75 33 33 19.517 19.768 29.768 29.768 29.768 36 37.72 36 37 36 37 18.453 18.728 18.728 18.998 19.260 19.517 19.768 29.7698 19.768 29.768 29.768 29.768 29.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698 19.768 29.7698	25		6.475	6.125	5.835	5°525	5.224	4.930	4.645	78		
8 6.807 6.477 6.152 5.835 5.526 75 33 19.517 19.768 2 30 6.808 6.477 6.152 5.835 74 34 19.261 19.517 19.768 2 2 6.808 6.477 72 36 18.453 18.728 18.998 19.261 19.517 19.768 2 39 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 1 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 1 17.591 17.884 18.172 18.453 18.728	6				5.835			4.930	77		30	
9 6.808 6.477 6.152 5.835 74 33 19.517 19.768 </th <th></th> <td></td> <td></td> <td>6.125</td> <td>5.835</td> <td></td> <td>5°224</td> <td>76</td> <td>22</td> <td>31</td> <td>20.013</td> <td></td>				6.125	5.835		5°224	76	22	31	20.013	
30 6.808 6.477 6.152 78 36 8.477 6.152 78 36 8.477 6.152 78 36 8.477 6.152 78 36 8.477 6.152 78 36 8.477 72 6.808 71 70 38 18.172 18.453 18.728 18.998 19.260 19.517 19.768 29.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 29.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 29.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 20.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 20.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 20.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 20.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 20.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 20.17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.766 20.17.591 17.884 18.171 18.453 18.728 18.998 19.260 19.517 19.766 20.17.591 17.884 18.171 18.453 18.728 18.998 19.260 19.516 19.766 20.17.591 17.884 18.171 18.453 18.728 18.999 19.259 19.515 19.765 20.17.590 17.884 18.171 18.453 18.728 18.999 19.259 19.515 19.765 20.17.590 17.884 18.171 18.453 18.728 18.999 19.255 19.514 19.763 20.17.590 17.883 18.170 18.451 18.452 18.725 18.999 19.255 19.509 19.755 19.765 20.17.590 17.883 18.169 18.449 18.722 18.999 19.251 19.504 19.749 19.759 17.884 18.171 18.453 18.722 18.999 19.255 19.504 19.749 19.759 17.885 18.165 18.443 18.771 18.994 19.225 19.504 19.749 19.741 19.7588 17.580 17.880 18.165 18.443 18.771 18.995 19.220 19.465 19.999 19.751 19.758 17.588 17.880 18.165 18.443 18.771 18.996 19.220 19.465 19.999 19.751 19.758 17.588 17.880 18.165 18.443 18.771 18.996 19.220 19.465 19.999 19.751 19.758 19.758 17.588 17.880 18.165 18.443 18.771 18.996 19.220 19.465 19.999 19.751 19.758 19.758 19.758 19.758 19.999 19.225 19.465 19.999 19.7588 19.758 19.758 19.758 19.758 19.758 19.758 19.758 19.758 19.7							75		32	19.768	20,013	7755
1 6.808 6.477 72 72 36 8.808 71 70 38 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.765 2 17.591 17.884 18.171 18.453 18.728 18.998 19.260 19.515 19.765 2 17.591 17.884 18.171 18.453 18.728 18.997 19.259 19.515 19.765 2 17.591 17.884 18.171 18.453 18.728 18.997 19.258 19.514 19.763 2 18.7591 17.884 18.171 18.452 18.728 18.997 19.258 19.514 19.763 2 18.7590 17.883 18.170 18.451 18.725 18.996 19.257 19.512 19.760 2 17.590 17.883 18.160 18.449 18.722 18.998 19.240 19.498 19.741 18.451 18.758 18.998 19.240 19.498 19.741 18.451 18.758 18.998 19.240 19.498 19.741 19.758 17.588 17.580 17.882 18.165 18.443 18.714 18.977 19.232 19.499 19.731 19.717 19.758 17.588 17.880 18.165 18.443 18.714 18.977 19.232 19.499 19.731 19.717 19.758 17.588 17.880 18.165 18.443 18.707 18.968 19.220 19.465 19.699 19.757 19.758 17.588 17.589 17.587 18.161 18.438 18.707 18.968 19.220 19.465 19.699 19.757 19.758 17.588 17.589 17.589 18.165 18.443 18.709 18.968 19.220 19.465 19.699 19.757 19.758 17.588 17.589 17.589 18.969 19.220 19.465 19.699 19.757 19.758 19.7583 17.583 18.165 18.443 18.709 18.968 19.220 19.465 19.699 19.757 19.758 19.7583 18.165 18.443 18.709 18.968 19.220 19.465 19.699 19.757 19.758 19.7583 18.165 18.443 18.709 18.968 19.220 19.465 19.699 19.757 19.758 19.7583 18.556 18.443 18.709 18.968 19.220 19.465 19.699 19.757 19.758 19.7583 18.165 18.443 18.709 18.968 19.220 19.465 19.699 19.757 19						74	24	33	19.517	10.768	20.013	72
2 6·8o8 71 72 36 18·728 18·998 19·261 19·517 19·768 2 39 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 63 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 2 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 2 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 2 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 4 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 2 59 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·765 2 59 17·591 <th< th=""><th></th><td></td><td></td><td></td><td>73</td><td>25</td><td>34</td><td>19.261</td><td>10.217</td><td></td><td>20,013</td><td>70</td></th<>					73	25	34	19.261	10.217		20,013	70
To 38 18·172 18·453 18·728 18·998 19·260 19·517 19·768 28 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 28 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 28 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·768 28 17·591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·767 28 18·7591 17·884 18·172 18·453 18·728 18·998 19·260 19·517 19·767 28 18·7591 17·884 18·171 18·453 18·728 18·998 19·260 19·517 19·766 28 17·591 17·884 18·171 18·453 18·728 18·998 19·260 19·517 19·765 28 17·590 17·884 18·171 18·453 18·728 18·997 19·259 19·515 19·765 28 17·590 17·883 18·171 18·452 18·727 18·996 19·257 19·509 19·756 28 17·590 17·883 18·170 18·451 18·722 18·994 19·255 19·509 19·756 28 17·590 17·883 18·160 18·449 18·722 18·998 19·247 19·498 19·741 18·451 18·453 18·728 18·994 19·255 19·509 19·751 19·760 28 17·586 17·880 18·165 18·443 18·710 18·984 19·240 19·490 19·731 18·451 18·453 18·728 18·997 19·232 19·409 19·731 18·451 18·453 18·728 18·998 19·240 19·490 19·731 18·451 18·453 18·728 18·998 19·240 19·490 19·731 18·451 18·453 18·728 18·989 19·240 19·490 19·731 18·451 18·453 18·728 18·998 19·240 19·490 19·731 18·451 18·453 18·767 18·984 19·240 19·490 19·731 18·451 18·453 18·767 18·465 18·443 18·707 18·968 19·220 19·465 19·699 18·758 17·883 18·161 18·438 18·707 18·968 19·220 19·465 19·678 18·465 18·431 18·698 18·956 19·205 19·465 19·698 18·678 18·698 18·956 19·205 19·465 19·678 18·465 18·431 18·698 18·956 19·205 19·465 19·678 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 18·465 1				72	36	35	18.998	10,361			20,013	69
38 39 17:591 17:884 18:172 18:453 18:728 18:998 19:260 19:517 19:768 2 17:591 17:884 18:172 18:453 18:728 18:998 19:260 19:517 19:768 2 17:591 17:884 18:172 18:453 18:728 18:998 19:260 19:517 19:768 2 17:591 17:884 18:172 18:453 18:728 18:998 19:260 19:517 19:768 2 17:591 17:884 18:172 18:453 18:728 18:998 19:260 19:517 19:768 2 17:591 17:884 18:172 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 19:760 2 19:765 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 18:453 18:728 18:998 19:260 19:517 19:768 2 19:760 2 19:765 2 18:453 18:728 18:998 19:260 19:517 19:768 2 19:760 2 19:765 2 19:760 2 19:770 2 19:770 2 19:770 2 19:770 2 1	2		71	37		18.728	18.008				20,013	8
39 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.516 19.766 2 17.591 17.884 18.171 18.453 18.728 18.997 19.259 19.515 19.765 2 17.591 17.884 18.171 18.453 18.728 18.997 19.258 19.514 19.763 2 17.590 17.884 18.171 18.452 18.727 18.996 19.257 19.512 19.760 2 17.590 17.883 18.170 18.451 18.725 18.994 19.255 19.509 19.755 19.765 2 17.590 17.883 18.160 18.440 18.722 18.989 19.240 19.498 19.741 18.451 18.758 17.588 17.880 18.165 18.443 18.714 18.977 19.232 19.498 19.717		70	38		18.453	18.728				- •	20,013	7
17.591		30		18.172	18.453						20'013	6
63 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.768 2 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 1 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 60 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.516 19.766 2 59 17.591 17.884 18.171 18.453 18.728 18.998 19.260 19.516 19.766 2 59 17.591 17.884 18.171 18.453 18.728 18.997 19.258 19.514 19.763 2 8 17.591 17.884 18.171 18.452 18.727 18.996 19.257 19.512 19.760 2 7 17.590 17.883 18.171 18.452			17.884	18.172	18.453	18.728		19.260			20'012	5
63 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 1 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.516 19.766 2 60 17.591 17.884 18.171 18.453 18.728 18.997 19.259 19.515 19.765 2 59 17.591 17.884 18.171 18.453 18.728 18.997 19.258 19.514 19.763 2 8 17.591 17.884 18.171 18.452 18.727 18.996 19.257 19.512 19.760 2 7 17.590 17.884 18.171 18.452 18.726 18.994 19.255 19.504 19.740 1 5 17.590 17.883 18.160 18.445 18.725 18.992 19.251 19.504 19.749 1 54 </th <th></th> <td>17.591</td> <td>17.884</td> <td>18.172</td> <td>18.453</td> <td>18.728</td> <td>18.998</td> <td>19'260</td> <td>19.217</td> <td>19'768</td> <td>20.015</td> <td>64</td>		17.591	17.884	18.172	18.453	18.728	18.998	19'260	19.217	19'768	20.015	64
2 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.517 19.767 2 1 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.516 19.766 2 60 17.591 17.884 18.172 18.453 18.728 18.997 19.259 19.515 19.765 2 59 17.591 17.884 18.171 18.453 18.728 18.997 19.258 19.514 19.763 2 8 17.591 17.884 18.171 18.452 18.727 18.996 19.257 19.512 19.760 2 7 17.590 17.884 18.171 18.452 18.726 18.994 19.255 19.504 19.760 2 6 17.590 17.883 18.170 18.451 18.725 18.994 19.255 19.504 19.749 1 5 17.590 17.883 18.160 18.449 18.722 18.989 19.247 19.498 19.741 1 54 <th>63</th> <td>17.591</td> <td></td> <td>18.172</td> <td>18.453</td> <td>18.728</td> <td></td> <td></td> <td></td> <td></td> <td>20.013</td> <td>3</td>	63	17.591		18.172	18.453	18.728					20.013	3
1 17.591 17.884 18.172 18.453 18.728 18.998 19.260 19.516 19.766 2 60 17.591 17.884 18.172 18.453 18.728 18.997 19.259 19.515 19.765 2 59 17.591 17.884 18.171 18.453 18.728 18.997 19.258 19.514 19.763 2 8 17.591 17.884 18.171 18.452 18.727 18.996 19.257 19.512 19.760 2 7 17.590 17.884 18.171 18.452 18.726 18.994 19.255 19.504 19.765 2 6 17.590 17.883 18.170 18.451 18.725 18.992 19.251 19.504 19.749 1 5 17.590 17.883 18.169 18.449 18.722 18.989 19.247 19.498 19.741 1 54 17.580 17.882 18.165 18.443 18.714 18.977 19.232 19.479 19.717 1 2 <th></th> <td></td> <td></td> <td></td> <td>18.453</td> <td>18.728</td> <td></td> <td>19.260</td> <td>19'517</td> <td>19'767</td> <td>20'011</td> <td>2</td>					18.453	18.728		19.260	19'517	19'767	20'011	2
59 17.591 17.884 18.171 18.453 18.728 18.997 19.258 19.514 19.763 2 8 17.591 17.884 18.171 18.452 18.727 18.996 19.257 19.512 19.760 2 7 17.590 17.884 18.171 18.452 18.726 18.994 19.255 19.509 19.755 1 6 17.590 17.883 18.170 18.451 18.725 18.992 19.251 19.504 19.749 1 5 17.590 17.883 18.169 18.449 18.722 18.989 19.247 19.498 19.741 1 54 17.589 17.882 18.165 18.446 18.719 18.984 19.240 19.490 19.731 1 2 17.586 17.877 18.161 18.438 18.707 18.968 19.220 19.465 19.699 1 1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1	_				18.453		18.998	19.500			20'010	1
8 17.591 17.884 18.171 18.452 18.727 18.996 19.257 19.512 19.760 2 7 17.590 17.884 18.171 18.452 18.726 18.994 19.255 19.509 19.755 1 6 17.590 17.883 18.170 18.451 18.725 18.992 19.251 19.504 19.749 1 5 17.590 17.883 18.169 18.449 18.722 18.989 19.247 19.498 19.741 1 54 17.589 17.882 18.167 18.446 18.719 18.984 19.240 19.490 19.731 1 3 17.588 17.880 18.165 18.443 18.714 18.977 19.232 19.479 19.717 1 2 17.586 17.873 18.161 18.438 18.707 18.968 19.220 19.465 19.699 1 1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1	60		100 0				18.997				20.008	60
7 17.590 17.884 18.171 18.452 18.726 18.994 19.255 19.509 19.755	_										20.002	59
6 17.590 17.883 18.170 18.451 18.725 18.992 19.251 19.504 19.749 1 5 17.590 17.883 18.169 18.449 18.722 18.989 19.247 19.498 19.741 1 54 17.589 17.882 18.167 18.446 18.719 18.984 19.240 19.490 19.731 1 8 17.588 17.880 18.165 18.443 18.714 18.977 19.232 19.479 19.717 1 2 17.586 17.877 18.161 18.438 18.707 18.968 19.220 19.465 19.699 1 1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1											20,001	8
5 17.590 17.883 18.169 18.449 18.722 18.989 19.247 19.498 19.741 1 54 17.589 17.882 18.167 18.446 18.719 18.984 19.240 19.490 19.731 1 3 17.588 17.880 18.165 18.443 18.714 18.977 19.232 19.479 19.717 1 2 17.586 17.877 18.161 18.438 18.707 18.968 19.220 19.465 19.699 1 1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1											19,992	7
54 17.589 17.882 18.167 18.446 18.719 18.984 19.240 19.490 19.731 1 3 17.588 17.880 18.165 18.443 18.714 18.977 19.232 19.479 19.717 1 2 17.586 17.877 18.161 18.438 18.707 18.968 19.220 19.465 19.699 1 1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1											19.987	6
8 17.588 17.880 18.165 18.443 18.714 18.977 19.232 19.479 19.717 1 2 17.586 17.877 18.161 18.438 18.707 18.968 19.220 19.465 19.699 1 1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1											19'977	5
2 17.586 17.877 18.161 18.438 18.707 18.968 19.220 19.465 19.699 1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1						18.719					19.964	54
1 17.583 17.873 18.156 18.431 18.698 18.956 19.205 19.446 19.678 1											19'947	3
								-			19,000	2
1 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1											19.868	50
39 38 37 36 35 34 33 32 31		39	38	37	36	35	34	33	32	31	30	

 $O^{\mathbb{M}(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	80	81	82	83	84	85	86	87	88	89	Dura-
tion.	3.843	3.595	3.356	3.127	2.907	2.697	2.498	2.307	2.127	1.956	tion.
0	.000	0000	.000	,000	.000	*000	000°	.000	.000	.000	0
1	*836	.825	.813	.800	.786	.771	°755	'738	.720	.700	1
2	1.227	1,496	1,464	1,429	1,393	1.354	1,315	1.560	1.523	1.176	3
$\begin{vmatrix} 3 \\ 4 \end{vmatrix}$	2.088	2°033 2°456	2.370	2,581	1.821 5.188	2.093	1.713	1.893	1.262	1.488	4
5	2.537	2'781	2.668	2.221	2'432	2,300	2'185	2.020	1.933	1.807	5
6	3.163	3.027	2.888	2.746	2'602	2°456	2,310	2°164	2,030	1.877	6
7	3.368	3,500	3'047	2.882	2.717	2.223	2.389	2°228	2'070	1'917	7
8	3.20	3.339	3'157	2.975	2.793	2.614	2.438	2.266	2.099	1.937	8
9	3.629	3.431	3.533	3.036	2.841	2.621	2,466	2.586	2'114	1.948	9
10	3.706	3.493	3.585	3.074	2.871	2.673	2°482	2.594	2,151	1.923	10
1	3.758	3°534	3,313	3.098	2.888	2.685	2.490	2,303	2,152	1.952	1
2	3.792	3°559	3.332	3,111	2.897	2'692	2,494	2.306	2,139	1.956	3
3 4	3.813	3.575	3.344	3,113	2.002	2.695	2.496	2:307	2'127	1.956	0
	3.827	3.584	3.320	3,152	2.902	2.696	2'497 2'498	2.307	88	89	
15	3.834 3.839	3 509	3°353 3°355	3.152	2 900	2.697	2'498	87		20	
7	3.841	3°594	3.356	3.152	2.907	2.697	86		21	99,199	
8	3.842	3.594	3.356	3.122	2.907	85		22	21.946	22.132	
9	3.843	3.594	3.326	3.154	84		23	21.754		22.135	82
20	3.843	3.292	3.326	83		24	21.557		21.946	22.132	80
1	3.843	3.595	82	26	25	21.354		21.754	21'946	22,135	79
2	3.843	81	27		21.145	21.324	21.224	21.754	21'946	22'132	8
	80	28		20.931	21'145	21'354	21.221	21.754	21'946	22,135	7
	29		20.710	20'931	21.142	21,323	21.22	21.754	21.946	22,135	6
		20.484	20'710	20'931	21.142	21.323	21.22.	21.754	21.946	22.135	5
	20.251	20.484	20.410	20'931	21'145	21.323	21.557	21.754	21.945	22.135	74
73	20'251	20°484	20'710	20.930	21°145	21,323	21.22	21.754	21'945	22,135	3
2	20'251	20°483	20'710	20'930	21'145	21,323	21.22	21.754	21.942	25,131	2
1 70	20.51	20.483	20'710	20,030	21'145	21.323	21.226	21.753	21,044	55,130	70
70	20,521	20.483	20.410	20.030	21'145	21°353	21.226	21.753	21.043	22,132	69
69	20°251	20.483	20'710		21'144	21,323	21.222	21.750	21'942	22'127	8
7	20°251	20'483	20,100			21,321	21.223	21.748	21'937	22,130	7
6	20'251	20.483	20.700	- 6		21,349	21.221	21.745	21.933	22'114	6
5	20'251	20.482	20.708	20.927	21'140	21'347	21.247	21.741	21'927	22'107	5
64	20*250	20.482	20.707	20.926	21,138	21.344	21.243	21.735	21.920	22.008	64
3	20°250	20.480	20.702		21,132	21,339	21.237	21'727	21.010	22.086	3
2	20°248	20°479	20.703	20.020	21,130	21,333	21.229	21'717	21.898	22.072	2
60	20°246		20.699	20.012		21,325	21.219	21.402	21.883	22.023	60
	20.244			20.800			21,480				59
59	20°234	20.467	20.687	20.888		51,300 51,300					8
7	20°227	20.450	20.666	20.873	21.072	21,563	21.445	21.918	21.485		7
6	20.514	20'438	20.621	20.855		21.532	21.416	21.282	21.745	21.897	6
5	20.504	20.422	20.632	20.832	21'024	21'207	21.381	21.246	21.702	21.849	5
54	20.188	20°402	20.608	20.802		21'171	21.341	21.201	21.652	21.795	54
3	20.164	20.378	20.280	20.773		21,130	21°294	21°450	21.596	21.734	3
2	20'142	20.349	20.247	20'734	20'913	21,081	21'241	21,391	21.233	21.666	2
50	20.115	20'314	20'507	20.689	20.863	21.026	51,113	21,329	21.465 51.465	21,200	50
		20'273	20'460	20.638							
	29	28	27	26	25	24	23	22	21	20	

0^{M(5)}

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	90	91	92	93	94	95	96	97	98	99	Dura-
tion.	1.794	1.613	1.497	1.365	1.236	1.122	1.009	·917	·826	.703	tion.
0	'000	000	'000	000	000	.000	.000	.000	.000	.000	0
1	.679	.658	.633	.610	.583	.558	.526	.502	.485	453	1
2	1.122	1.074	1,050	.966	.908	.852	.791	.746	705	.642	2
3	1.408	1.328	1'245	1.162	1.079	1,000	.919	.856	797	'703	3
4	1.281	1.476	1.371	1.560	1.162	1.072	977	902	.826	99	
				-					98		
5	1.681	1.223	1'437	1,325	1'207	1.104	1,001	.917	96	10	
6	1.737	1.603	1'470	1.347	1,550	1,118	1,000	97	II		
7	1.767	1.625	1.486	1,320	1.534	1,155	96	70		23.719	
8	1.485	1.632	1°493	1.364	1,536	95		12	23.581	201770	00
9	1.489	1.640	1.496	1,362	94		13	23.440		23.719	92
10	1.792	1.642	1'497	93		14	23.293		23.281	23.410	1
1	1.794	1.643	92		15	09.140		23.440	23.281	23.419	90
2	1.794	91		16	00.000	23.142	23.293	23.440	23.281	23.719	89
	90	-7	17	22.00	22.986	23.142	23.293	23'440	23.281	23'719	8
	30	18		22.825	22.986	23'142	23'293	23.440	23.281	23'719	7
	19		22.659	22.825	22.986	23'142	23.293	23.440	23.281	23.719	6
		22.490	22.659	22.825	22.986	23°142	23.293	23.440	23.281	23.719	5
	22.314	22.490	22.659	22.825	22.986	23°142	23°293	23.440	23.281	23.719	84
50	20'074		22.659		22.986				23.281	23.718	3
83	22'314	22.489	0,	1	22 900	23'142	23.293	23.440			_
2	22.314	22.489	22.659		22.986	23'142	23°293	23.439	23.281	23.718	2
1	22,314	22°489	22.659	22.825	22.986	23°142	23.292	23.439	23.280	23.717	1
80	22.314	22,489	22.659	22.825	22.986	23.145	23.595	23.438	23.280	23.419	80
79	22'314	22'489	22.659		22.986	23°141	23.292	23.438	23'579	23.412	79
8	22.314	22°489	22.659	22.825	22.982	23°141	23'291	23.437	23.577	23'713	8
7	22'313	22'489	22.659	22.824	22.985	23'140	23.290	23'435	23.575	23'710	7
6	22.313	22°489	22.659		22.984	23'139	23.588	23'433	23'572	23.707	6
5	22.313	22.489	22.659	22.823	22.983	23.132	23°286	23.430	23.268	23'702	5
74	22,313	22.488	22.658		22.081	23.132	23.283	23.426	23.263	23.695	74
3	55,315	22.487	22.657		22.979	23,135	23.523	23,421	23.226	23.687	3
2		22.486	22.655	22.818	22.976		23.573	23,414	23.248	23.677	2
lí	22,311	22 400	22.622			23'127	1			23.664	1
	22,310	22°484			22'971	23.155	23.266	23.405	23.537		70
70	22.308	22.481	22.649	22.810	22.965	23.114	23.527	23.394	23.24	23.649	
69	22,302	22.478	22.644	22.804	22'957	23.102	23°246	23.380	23.208	23.630	69
8	22,305	22.473	22.637		22.948	23,003	23.535	23.364	23.489	23.609	8
7	22,500	22.466	22.629		22.935	23.078	23.512	23.344	23.467	23.284	7
6	22,500	22.458	22.619		22'920	23.001	23°194	23.351	23.441	23.555	6
5	22.581	22.447	22.602	22.757	22.902	23°040	23.140	23.294	23.411	23.251	5
64	22.260	22.433	22:589	22.738	22.880	23.012	23°142	23.263	23.376	23.483	64
3	22.255	22.416	22.570	22.715	22.854	22.986	23,110	23.227	23.337	23'441	3
2	22.238	22.396	22.546	22.689	22.824	22.952	23.073	23.186	23.593	23.393	2
1	22.512	22.371	22.218	22.657	22.789	22.014	23.030	23.140	23.543	23.340	1
60	22,101	22°343	22.486	22.621	22.749	22.870	22.983	23.089	23.188	23.581	60
_		1							23.158		59
59	22.105	22.300	22'449		22 104	22 821	22 930		53.001	23.514	8
8	22'127	22.270	22.406			22.766				23.147	
7	22.087		22.357			22.705	22.806	1 20	22.088	23.021	7
6	22'041	22.175	22,305		22.233				22,000	22.988	6
5	21.088	22,110	22,541	22.352	22,463	22°563	22.656	22.743	22.823	22.899	5
54	21,050	22.022	22.173	22.583	22°386	22°482	22.21	22.654	22.431	22.802	54
3	21.864	21.985	22.008		22.305	22.394		22.228	22.631	22.700	3
2	21.790	21.002	22'015	22.119	22'211	22.298	22.380	22.455	22.222	22.289	2
1	21.410	21.821	21.925	22.031	22'112	22.195	22.273	22.344	22'411	22.472	1
50	21.621	21.728	21.827	21,010	22'005	22.084	22.128	22.536	22.289	22.347	50
	TO	18		16		TA		12	II	IO	
	19	10	17	10	15	14	13	14	11	10	

O^{M(5)}

$3\frac{1}{2}$ PER CENT.

CONSTANTS.

Constant.	Number.	Logarithm.
i $(1+i)$ $(1+i)^{\frac{1}{2}}$ $(1+i)^{\frac{1}{4}}$ v $v^{\frac{1}{2}}$	°035 1°035 1°017 349 5 1°008 637 4 °966 183 6 °982 946 4	2.544 068 0 0.014 940 3 0.007 470 2 0.003 735 1 7.985 059 7 7.992 529 8
v [‡] d	'991 436 5 '033 816 4 '034 401 4	7 992 529 6 7 996 264 9 2 529 127 7 2 536 576 5

OM(5)

COMMUTATION TABLE

 $3^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

x	D_x	\mathbb{N}_x	S_x	\mathbf{C}_x	M_x	\mathbb{R}_x	x
10	76 084	1 716 653	22 272 827	150.60	18 00000	598 994.78	10
11	73 060	1 640 569	33 050 827	450.69	18 033.01	580 961.77	11
12	70 154	1 567 509	29 693 605	419.45	17 146.87	563 379 45	12
13	67 363	1 497 355	28 126 096	404.65	16 727.42	546 232.58	13
14	64 680	1 429 992	26 628 741	390.37	16 322.77	529 505.16	14
15	62 103	1 365 312	25 198 749	377.16	15 932.40	513 182.39	15
16	59 625	1 303 209	23 833 437	364.41	15 555 24	497 249 99	16
17	57 244	1 243 584	22 530 228	352.63	15 190.83	481 694.75	17
18	54 956	1 186 340	21 286 644	340.40	14 838 20	466 503°92 451 665°72	18
	52 757		9 .	329.18	14 497 50		
20 21	50 643 48 612	1 078 627	18 968 920	319'02	14 168 32	437 168.22	20 21
22	46 658	979 372	17 890 293 16 862 309	309.64 299.62	13 849 30	422 999 90	21 22
23	44 781	979372	15 882 937	290.80	13 240'04	395 610'94	23
24	42 975	887 933	14 950 223	282.24	12 949 24	382 370.00	24
25	41 240	844 958	14 062 290	274.74	12 667.00	369 421.66	25
26	39 571	803718	13 217 332	267.03	12 392.26	356 754.66	26
27	37 966	764 147	12 413 614	259'91	12 125'23	344 362 40	27
28	36 422	726 181	11 649 467	253.70	11 865.32	332 237 17	28
	34 937	689 759	10 923 286	247.26	11 611.65	320 371.85	29
30	33 508	654 822	10 233 527	241'99	11 364.36	308 760.23	30
31 32	32 133	621 314	9 578 705	236.47	11 122 37	297 395.87	31
33	30 810	589 181 558 371	8 957 391 8 368 210	231.37	10 885'90	286 273.50	32
34	28 311	528 834	7 809 839	223.18	10 427.26	264 733.07	34
35	27 130	500 523	7 281 005	219'40	10 204.08	254 305.81	35
36	25 993	473 393	6 780 482	215'90	9 984.68	244 101'73	36
37	24 898	447 400	6 307 089	213'20	9 768.78	234 117.05	37
38	23 843	422 502	5 859 689	210'70	9 555.58	224 348 27	38
39	22 826	398 659	5 437 187	208.37	9 344 88	214 792.69	39
40	21 846	375 833	5 038 528	206.45	9 136.21	205 447.81	40
41	20 901	353 987	4 662 695	204.89	8 930'06	196 311,30	41
42	19 989	333 086	4 308 708	203.89	8 725.17	187 381.24	42
43	19 109	313 097 293 988	3 975 622 3 662 525	202'94	8 521°28 8 318°34	178 656 07	43
45	17 440	275 728 258 288	3 368 537 3 092 809	202'18	8 116,10	161 816°45 153 700°35	45
47	15 883	241 640	2 834 521	202.22	7 913'92	145 786.43	46 47
48	15 144	225 757	2 592 881	503,11	7 509.28	138 074.60	48
49	14 428	210613	2 367 124	203.94	7 306.17	130 565.32	49
50	13 737	196 185	2 156 511	205.00	7 102.23	123 259.15	50
51	13 067	182 448	1 960 326	206.56	6 897.23	116 156.92	51
52	12 419	169 381	1 777 878	207.68	6 690 97	109 259.69	52
53 54	11 791	156 962	1 608 497	209.26	6 483.29	102 568.72	53
OÆ	11 103	145 171	1 451 535	211.36	6 273.73	96 085.43	54

OM(5)

COMMUTATION TABLE

 $3^{\frac{1}{2}}_{\text{CENT}}^{\text{PER}}$

x	D_x	\mathbb{N}_x	S_x	C_x	M_x	R_x	x
55 56 57 58 59	10 593° 10 022° 9 467°7 8 930°3 8 409°0	133 988° 123 395° 113 372°6 103 904°9 94 974°6	1 306 364° 1 172 376° 1 048 981°3 935 608°7 831 703°8	213'25 215'18 217'29 219'27 221'12	5 633°94 5 416°65	89 811.70 83 749.33 77 900.21 72 266.27 66 849.62	55 56 57 58 59
60 61 62 63 64	7 903.6 7 413.2 6 937.8 6 477.0 6 030.7	86 565.6 78 662.0 71 248.8 64 311.0	736 729°2 650 163°6 571 501°6 500 252°8 435 941°8	223'09 224'79 226'12 227'32 227'97	4 976°26 4 753°17 4 528°38	61 652·24 56 675·98 51 922·81 47 394·43 43 992·17	60 61 62 63 64
65 66 67 68 69	5 598.8 5 181.1 4 777.9 4 389.3 4 015.4	51 803°3 46 204°5 41 023°4 36 245°5 31 856°2	378 107.8 326 304.5 280 100.0 239 076.6 202 831.1	228°31 227°97 227°01 225°48 222°99	3 846.97 3 618.66 3 390.69	39 017.23 35 170.26 31 551.60 28 160.91 24 997.23	65 66 67 68 69
70 71 72 73 74	3 656°7 3 313°3 2 985°8 2 674°5 2 380°1	27 840.8 24 184.1 20 870.8 17 885.0 15 210.5	170 974'9 143 134'1 118 950'0 98 079'2 80 194'2	219.71 215.47 210.29 204.04 196.69	2 715'21 2 495'50 2 280'03 2 069'74 1 865'70	22 059°03 19 343°82 16 848°32 14 568°29 12 498°55	70 71 72 73 74
75 76 77 78 79	2 102'9 1 843'5 1 602'3 1 379'6 1 175'7	12 830°4 10 727°5 8 884°0 7 281°7 5 902°1	64 983.7 52 153.3 41 425.8 32 541.8 25 260.1	188.28 178.87 168.52 157.21 145.19	1 669'01 1 480'73 1 301'86 1 133'34 976'13	10 632.85 8 963.84 7 483.11 6 181.25 5 047.91	75 76 77 78 79
80 81 82 83 84	990°76 824°69 677°28 548°10 436°51	4 726*40 3 735*64 2 910*95 2 233*67 1 685*57	19 358·02 14 631·62 10 895·98 7 985·03 5 751·36	132°58 119°52 106°27 93°061 80°192	830°94 698°36 578°84 472°568 379°507	4 071°78 3 240°84 2 542°48 1 963°642 1 491°074	80 81 82 83 84
85 86 87 88 89	341°55 •262°13 197°00 144°66 103°58	1 249*06 • 907*51 645*38 448*38 303*72	4 065'79 2 816'73 1 909'22 1 263'84 815'46	67.880 56.257 45.684 36.182	299°315 231°435 175°178 129°494 93°312	1 111.567 812.252 580.817 405.639 276.145	85 86 87 88 89
90 91 92 93 94	72'177 48'763 31'916 20'109	200'138 127'961 79'198 47'282 27'173	511.738 311.600 183.639 104.441 57.159	20.973 15.198 10.728 7.212 1 4.721 6	65'409 44'436 29'238 18'510 3	182.833 117.424 72.988 43.750 3 25.240 0	90 91 92 93 94
95 96 97 98 99	7.082 4 3.936 5 2.061 6 1.030 3 497 7	7 ⁸ 73 3 3 ⁹³⁶ 8	29°985′8 15°030 1 7°156 8 3°220 0 1°344 8	1.741 7 .961 6 .497 7	3.670 2 1.928 5 .966 9 .469 2	799 6	96 97 98 99
100 101 102	°224 4 °092 9 °029 9	347 ² 122 8 029 9	*029 9	0599	'212 7 '088 8 '028 9		101

 $\mathbf{O}^{\mathbf{M}(5)}$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{3}^{1}_{2}$ cent.

					-				
x	$\log D_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	$\operatorname{col} \mathrm{C}_x$	$\operatorname{col} \operatorname{M}_x$	x
10	4.881 29	6.234 68	2.653 88	4.256 07	5'118 71	7.765 32	3·346 12	5.743 93	10
11	.863 68	214 99	.638 94	.245 08	'136 32	.785 01	·361 06	.754 92	11
12	.846 05	195 21	.622 68	.234 18	'153 95	.804 79	·377 32	.765 82	12
13	.828 42	175 33	.607 08	.223 43	'171 58	.824 67	·392 92	.776 57	13
14	.810 77	155 34	.591 47	.212 79	'189 23	.844 66	·408 53	.787 21	14
15	7793 11	'135 23	576 53	°202 28	*206 89	864 77	*423 47	'797 72	15
16	7775 43	'115 01	561 59	°191 88	*224 57	884 99	*438 41	'808 12	16
17	7757 73	'094 68	547 32	°181 58	*242 27	905 32	*452 68	'818 42	17
18	7740 01	'074 21	532 37	°171 38	*259 99	925 79	*467 63	'828 62	18
19	722 28	'053 61	517 43	°161 29	*277 72	946 39	*482 57	'838 71	19
20	'704 52	°032 87	°503 82	151 32	'295 48	'967 13	*496 18	*848 68	20
21	'686 74	°011 99	°490 86	141 43	'313 26	'988 01	*509 14	*858 57	21
22	'668 93	5'990 95	°476 57	131 61	'331 07	6'009 05	*523 43	*868 39	22
23	'651 09	'969 75	°463 60	121 89	'348 91	'030 25	*536 40	*878 11	23
24	'633 22	'948 38	°450 62	112 24	'366 78	'051 62	*549 38	*887 76	24
25	*615 32	'926 84	°438 92	102 67	'384 68	°073 16	*561 08.	*897 33	25
26	*597 38	'905 10	°426 56	093 15	'402 62	°094 90	*573 44	*906 85	26
27	*579 39	'883 18	°414 82	083 69	'420 61	°116 82	*585 18	*916 31	27
28	*561 36	'861 04	°404 32	074 28	'438 64	°138 96	*595 68	*925 72	28
29	*543 28	'838 70	°393 15	064 89	'456 72	°161 30	*606 85	*935 11	29
30	°525 15	'816 12	383 80	°055 54	*474 85	183 88	'616 20	'944 46	30
31	°506 95	'793 31	373 78	°046 20	*493 05	206 69	'626 22	'953 80	31
32	°488 69	'770 25	364 30	°036 86	*511 31	229 75	'635 70	'963 14	32
33	°470 36	'746 92	356 54	°027 53	*529 64	253 08	'643 46	'972 47	33
34	°451 95	'723 32	348 66	°018 17	*548 05	276 68	'651 34	'981 83	34
35	'433 45	699 42	'341 24	.008 77	'566 55	300 58	658 76	'991 23	35
36	'414 86	675 22	'334 26	3.999 33	'585 14	324 78	665 74	4'000 67	36
37	'396 17	650 70	'328 79	.989 84	'603 83	349 30	671 21	'010 16	37
38	'377 36	625 83	'323 66	.980 26	'622 64	374 17	676 34	'019 74	38
39	'358 43	600 60	'318 84	.970 57	'641 57	399 40	681 16	'029 43	39
40	'339 37	'574 99	'314 82	'960 78	.660 63	'425 01	685 18	°039 22	40
41	'320 16	'548 99	'311 53	'950 86	.679 84	'451 01	688 47	°049 14	41
42	'300 79	'522 56	'309 39	'940 78	.699 21	'477 44	690 61	°059 22	42
43	'281 24	'495 68	'307 36	'930 51	.718 76	'504 32	692 64	°069 49	43
44	'261 50	'468 33	'305 86	'920 04	.738 50	'531 67	694 14	°079 96	44
45	'241 55	'440 48	°3°5 74	*909 35	.758 45	'559 52	*694 26	°090 65	45
46	'221 37	'412 10	°3°5 55	*898 39	.778 63	'587 90	*694 45	°101 61	46
47	'200 94	'383 17	°3°6 53	*887 16	.799 06	'616 83	*693 47	°112 84	47
48	'180 23	'353 64	°3°7 73	*875 60	.819 77	'646 36	*692 27	°124 40	48
49	'159 22	'323 49	°3°9 51	*863 69	.840 78	'676 51	*690 49	°136 31	49
50	137 87	°292 67	'311 76 '314 42 '317 40 '321 30 '325 03	*851 39	*862 13	'707 33	.688 24	°148 61	50
51	116 17	°261 14		*838 67	*883 83	'738 86	.685 58	'161 33	51
52	1094 08	°228 86		*825 49	*905 92	'771 14	.682 60	°174 51	52
53	1071 56	°195 79		*811 80	*928 44	'804 21	.678 70	°188 20	53
54	1048 55	°161 88		*797 53	*951 45	'838 12	.674 97	'202 47	54

 $\mathbf{0}^{\mathbf{M}(5)}$ logarithms and co-logarithms of D_x , N_x , C_x , M_x $\mathbf{3}^{\frac{1}{2}}_{\mathbf{cent}}$.

x	$\log \mathrm{D}_x$	$\log N_x$	$\log C_x$	$\log \mathrm{M}_x$	$\operatorname{col} \operatorname{D}_x$	$col N_x$	$\operatorname{col} \operatorname{C}_x$	$\operatorname{col} \mathbf{M}_x$	x
55 56 57 58 59	4.025 03 .000 95 3.976 25 .950 87 .924 75	5'127 07 '091 30 '054 51 '016 64 4'977 61	2'328 88 '332 81 '337 04 '340 98 '344 63	3.782 64 .767 09 .750 81 .733 73 .715 78	5.974 97 .999 05 4.023 75 .049 13	6·872 93 ·908 70 ·945 49 ·983 36 5·022 39	3.671 12 .667 19 .662 96 .659 02 .655 37	4·217 36 ·232 91 ·249 19 ·266 27 ·284 22	55 56 57 58 59
60 61 62 63 64	·897 82 ·870 01 ·841 22 ·811 37 ·780 37	'937 35 '895 77 '852 78 '808 29 '762 18	'348 47 '351 77 '354 33 '356 63 '357 87	.696 90 .676 99 .655 94 .633 70 .610 12	'102 18 '129 99 '158 78 '188 63 '219 63	'062 65 '104 23 '147 22 '191 71 '237 82	651 53 648 23 645 67 643 37 642 13	'303 10 '323 01 '344 06 '366 30 '389 88	60 61 62 63 64
65 66 67 68 69	748 09 714 42 679 24 642 40 603 73	714 35 664 68 613 03 559 26 503 19	358 53 357 88 356 05 353 11 348 28	585 12 558 55 530 29 500 20 468 08	*251 91 *285 58 *320 76 *357 60 *396 27	*285 65 *335 32 *386 97 *440 74 *496 81	641 47 642 12 643 95 646 89 651 72	'414 88 '441 45 '469 71 '499 80 '531 92	65 66 67 68 69
70 71 72 73 74	563 09 520 26 475 06 427 25 376 59	'444 68 '383 53 '319 54 '252 49 '182 14	'341 84 '333 38 '322 82 '309 72 '293 78	'433 80 '397 16 '357 94 '315 92 '270 84	'436 91 '479 74 '524 94 '572 75 '623 41	555 3 ² 616 47 680 46 747 51 817 86	658 16 666 62 677 18 690 28	566 20 602 84 642 06 684 08 729 16	70 71 72 73 74
75 76 77 78 79	322 82 265 64 204 74 139 75 070 30	°108 24 °030 50 3°948 61 °862 23 °771 01	°274 80 °252 54 °226 65 °196 47 °161 94	°222 46 °170 48 °114 56 °054 36 2°989 51	'677 18 '734 36 '795 26 '860 25 '929 70	.891 76 .969 50 4.051 39 .137 77 .228 99	'725 20 '747 46 '773 35 '803 53 '838 06	777 54 829 52 885 44 945 64 3.010 49	75 76 77 78 79
80 81 82 83 84	2'995 97 '916 29 '830 77 '738 86 '639 99	674 53 572 36 464 04 349 02 226 75	°122 47 °077 44 °026 42 1°968 77 °904 13	°919 57 °844 08 °762 56 °674 47 °579 22	3.004 03 .083 71 .169 23 .261 14 .360 01	325 47 427 64 535 96 650 98 773 25	·877 53 ·922 56 ·973 58 2·031 23 ·095 87	°080 43 °155 92 °237 44 °325 53 °420 78	80 81 82 83 84
85 86 87 88 89	'533 46 '418 51 '294 47 '160 34 '015 29	°096 58 2°957 85 °809 82 °651 65 °482 47	*831 74 *750 18 *659 76 *558 49 *445 65	'476 13 '364 43 '243 48 '112 25 1'969 94	'466 54 '581 49 '705 53 '839 66 '984 71	903 42 3.042 15 190 18 348 35 517 53	°168 26 °249 82 °340 24 °441 51 °554 35	.635 57 .756 52 .887 75 2.030 06	85 86 87 88 89
90 91 92 93 94	1.858 40 .688 09 .504 01 .303 39 .086 97	301 33 107 07 1898 71 674 70 434 14	321 67 181 79 030 50 0.858 06 674 09	'815 64 '647 74 '465 95 '267 42 '053 01	2.141 60 .311 91 .495 99 .696 61 .913 03	.698 67 .892 93 2.101 29 .325 30 .565 86	*678 33 *818 21 *969 50 1*141 94 *325 91	184 36 352 26 534 05 732 58 946 99	90 91 92 93 94
95 96 97 98 99	0.850 18 .595 11 .314 21 .012 97 T.697 00	174 81 0.896 16 595 14 273 05 1.926 81	'463 35 '240 98 1'983 00 '697 00 '409 06	0.818 00 .564 69 .285 22 1.985 38 .671 36	7:149 82 :404 89 :685 79 :987 03 0:303 00	-825 19 1.103 84 -404 86 -726 95 0.073 19	'759 02 0'017 00 '303 00 '590 94	7·182 00 ·435 31 ·714 78 0·014 62 ·328 64	95 96 97 98 99
100 101 102	-351 06 -351 06 -351 06 -476 08	.540 58 .089 20 2.476 08	.093 08 2.777 11 .461 14	327 77 2.948 41 361 14	.648 94 1.031 85 .523 92	'459 42 '910 80 1'523 92	.906 92 1.222 89 .538 86	672 23 1.051 59 538 86	100 101 102

WHOLE-LIFE PARTICIPATING ASSURANCES

MALE LIVES

 $O^{M(5)}$

Values of a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

x	a_x	A_x	P_x	\bar{a}_x	$\overline{\mathbf{A}}_{x}$	$\overline{\mathrm{P}}_{x}$	x
10	21°563	'23 702	'01 050	22'060	°24 110	°01 093	10
11	21°455	'24 066	'01 072	21'952	°24 482	°01 115	11
12	21°344	'24 442	'01 094	21'841	°24 864	°01 138	12
13	21°229	'24 832	'01 117	21'726	°25 259	°01 163	13
14	21°109	'25 236	'01 141	21'606	°25 672	°01 188	14
15	20'985	25 655	°01 167	21'482	*26 099	'01 215 '01 243 '01 272 '01 303 '01 335	15
16	20'857	26 089	°01 194	21'354	*26 539		16
17	20'724	26 537	°01 222	21'221	*26 997		17
18	20'587	27 000	°01 251	21'084	*27 468		18
19	20'445	27 480	°01 281	20'942	*27 957		19
20	20'299	27 977	'01 314	20'796	'28 459	'01 368	20
21	20'147	28 490	'01 347	20'644	'28 982	'01 404	21
22	19'990	29 019	'01 382	20'487	'29 522	'01 441	22
23	19'829	29 567	'01 420	20'326	'30 076	'01 480	23
24	19'662	30 131	'01 458	20'159	'30 650	'01 520	24
25	19°489	'30 715	'01 499	19'986	'31 245	'01 563	25
26	19°311	'31 316	'01 542	19'808	'31 858	'01 608	26
27	19°127	'31 937	'01 587	19'624	'32 491	'01 656	27
28	18°938	'32 578	'01 634	19'435	'33 141	'01 705	28
29	18°743	'33 236	'01 683	19'240	'33 812	'01 757	29
30	18.542	'33 915	'01 735	19°039	'34 5°3	'01 812	30
31	18.336	'34 614	'01 790	18'833	'35 212	'01 870	31
32	18.123	'35 332	'01 848	18'619	'35 948	'01 931	32
33	17.904	'36 072	'01 908	18'400	'36 701	01 995	33
34	17.680	'36 832	'01 972	18'176	'37 472	'02 062	34
35	17'449	'37 611	'02 039	17°945	'38 267	'02 132	35
36	17'212	'38 412	'02 109	17°708	'39 082	'02 207	36
37	16'969	'39 235	'02 183	17°465	'39 918	'02 286	37
38	16'720	'40 077	'02 262	17°216	'40 775	'02 368	38
39	16'465	'40 939	'02 344	16°961	'41 652	'02 456	39
40	16°204	'41 823	°02 431	16.700	'42 550	°02 548 °02 645 °02 748 °02 857 °02 972	40
41	15°937	'42 727	°02 523	16.433	'43 468		41
42	15°664	'43 651	°02 619	16.160	'44 407		42
43	15°385	'44 593	°02 722	15.881	'45 367		43
44	15°100	'45 555	°02 829	15.596	'46 348		44
45	14.810	°46 537	°02 944	15'306	'47 345	°03 093	45
46	14.514	°47 536	°03 064	15'010	'48 363	°03 222	46
47	14.213	°48 553	°03 191	14'709	'49 399	°03 358	47
48	13.908	°49 587	°03 326	14'404	'50 448	°03 502	48
49	13.597	°50 637	°03 469	14'093	'51 518	°03 656	49
50	13'282	'51 704	°03 620	13°778	°52 602	°03 818	50
51	12'963	'52 784	°03 780	13°459	°53 699	°03 990	51
52	12'639	'53 878	°03 950	13°135	°54 814	°04 173	52
53	12'312	'54 984	°04 131	12°808	°55 939	°04 367	53
54	11'982	'56 102	°04 322	12°478	°57 °74	°04 574	54

 $O^{M(5)}$

VALUES OF a_x , A_x P_x , AND OF $\overline{a_x}$, $\overline{A_x}$, $\overline{P_x}$ $\mathbf{3}_{2}^{1}$ PER CENT.

x	a_x	\mathbf{A}_{x}	P_x	\overline{a}_x	$\overline{\mathrm{A}}_{x}$	$\overline{\mathrm{P}}_{x}$	x
55 56 57 58 59	11.649 11.313 10.975 10.635	'57 228 '58 363 '59 506 '60 654 '61 806	°04 525 °04 740 °04 969 °05 213	12'144 11'808 11'470 11'130	58 223 59 379 60 542 61 711 62 884	°04 794 °05 029 °05 278 °05 545 °05 829	55 56 57 58 59
60 61 62 63	9°953 9°611 9°270 8°929	.62 962 .64 118 .65 27 1 .66 425	°05 472 °05 748 °06 043 °06 356 °06 690	10'789 10'448 10'106 9'764 9'423	64 057 65 234 66 410 67 583	°06 131 °06 455 °06 801 °07 172	60 61 62 63
64 65 66 67 68	8.590 8.253 7.918 7.586 7.258	'67 569 '68 712 '69 844 '70 966 '72 078	°07 046 °07 426 °07 832 °08 265 °08 728	9°084 8°746 8°411 8°079 7°750	68 751 69 911 71 064 72 206 73 338	°07 569 °07 993 °08 449 °08 937 °09 463 °10 026	64 65 66 67 68
69 70 71 72 73	6.933 6.614 6.299 5.990 5.687	73 173 74 252 75 318 76 362 77 387 78 388	'09 223 '09 753 '10 319 '10 924 '11 573 '12 266	7.426 7.106 6.791 6.481 6.178 5.881	74 454 75 556 76 639 77 704 78 748 79 769	'10 633 '11 286 '11 989 '12 747	69 70 71 72 73
74 75 76 77 78 79	5'391 5'101 4'819 4'545 4'278	79 367 '80 323 '81 249 '82 150 '83 025	13 008 13 803 14 654 15 564	5°591 5°308 5°032 4°765	'80 767 '81 740 '82 688 '83 607 '84 498	'13 564 '14 447 '15 400 '16 431 '17 545 '18 752	74 75 76 77 78
80 81 82 83 84	3'77° 3'53° 3'298 3'075 2'861	83 869 84 682 85 465 86 220 86 942	16 539 17 581 18 695 19 885 21 157	4.506 4.256 4.014 3.781 3.557 3.342	*85 360 *86 191 *86 993 *87 763 *88 504	20 058 21 473 23 008 24 673 26 484	79 80 81 82 83 84
85 86 87 88	2.657 2.462 2.276 2.100	*87 633 *88 292 *88 922 *89 518	23 963 25 502 27 143 28 880	3°136 2°939 2°751 2°573	.89 212 .89 889 .90 535 .91 149	28 450 30 583 32 906 35 427 38 171	85 86 87 88
89 90 91 92 93 94	1'932 1'773 1'624 1'481 1'351	'90 084 '90 623 '91 128 '91 609 '92 051	'30 723 '32 682 '34 727 '36 918 '39 149	2°403 2°241 2°090 1°945 1°811 1°681	'91 733 '92 289 '92 810 '93 310 '93 769	°41 173 °44 404 °47 984 °51 769	90 91 92 93
95 96 97 98	1'224 1'112 1'000 '910 '820	'92 478 '92 858 '93 235 '93 543 '93 845	'41 579 '43 973 '46 615 '48 987 '51 562	1°564 1°449 1°354 1°259	94 218 94 618 95 016 95 343 95 668	°56 °55 °6° 478 °65 582 °7° 431 °75 969	94 95 96 97 98
99 100 101 102	*698 *547 *322 *000	'94 267 '94 779 '95 556 '96 618	°55 533 °61 262 °72 312 °96 618	1°131 °975 °744 °414	'96 108 '96 645 '97 442 '98 574	'84 946 '99 110 1'31 052 2'37 861	99 100 101 102

OM(5) LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x $3\frac{1}{2}$ per cent.

v	$\log a_x$	$\log A_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
10	1°353 39	1°374 78 °381 40 °388 13 °395 01 °402 02	2.021 39	1°343 61	7·382 20	2·038 58	10
11	°351 31		.030 09	°341 47	·388 85	·047 39	11
12	°349 16		.038 97	°339 27	·395 57	·056 29	12
13	°346 91		.048 10	°336 98	·402 42	·065 43	13
14	°344 57		.057 45	°334 57	·409 46	·074 89	14
15	'342 12	'409 17	°067 05	*332 07	'416 62	°084 54	15
16	'339 58	'416 45	°076 87	*329 48	'423 88	°094 40	16
17	'336 95	'423 85	°086 90	*326 77	'431 32	°104 56	17
18	'334 20	'431 37	°097 17	*323 95	'438 83	°114 88	18
19	'331 33	'439 01	°107 68	*321 02	'446 49	°125 48	19
20	'328 35	'446 80	°118 45	'317 98	'454 22	136 24	20
21	'325 25	'454 69	°129 44	'314 79	'462 13	147 34	21
22	'322 02	'462 68	°140 66	'311 48	'470 15	158 66	22
23	'318 66	'470 80	°152 14	'308 05	'478 22	170 17	23
24	'315 16	'479 02	°163 86	'304 47	'486 43	181 96	24
25 26 27 28 29	'311 52 '307 72 '303 79 '299 68 '295 42	'487 35 '495 77 '504 30 '512 92 '521 61	175 83 188 05 200 51 213 24 226 19	'300 73 '296 84 '292 79 '288 58 '284 21	'494 78 '503 22 '511 76 '520 37 '529 07	194 07 206 37 218 98 231 78	25 26 27 28 29
30	*290 97	*53° 39	*239 42	*279 64	537 86	*258 21	30
31	*286 36	*539 25	*252 89	*274 92	546 69	*271 77	31
32	*281 56	*548 17	*266 61	*269 96	555 67	*285 71	32
33	*276 56	*557 17	*280 61	*264 82	564 68	*299 86	33
34	*271 37	*566 22	*294 85	*259 50	573 71	*314 20	34
35	°265 97	'575 32	'309 35	°253 94	'582 82	328 87	35
36	°260 36	'584 47	'324 11	°248 17	'591 98	343 80	36
37	°254 53	'593 67	'339 14	°242 17	'601 17	359 00	37
38	°248 47	'602 90	'354 43	°235 93	'610 39	374 46	38
39	°242 17	'612 14	'369 97	°229 45	'619 64	390 18	39
40	°235 62	'621 41	*385 79	°222 72	°628 90	°406 18	40
41	°228 83	'630 70	*401 87	°215 72	°638 17	°422 46	41
42	°221 77	'639 99	*418 22	°208 44	°647 45	°439 02	42
43	°214 44	'649 27	*434 83	°200 88	°656 74	°455 86	43
44	°206 83	'658 54	*451 71	°193 01	°666 03	°473 02	44
45 46 47 48 49	198 93 190 73 182 23 173 41 164 27	667 80 677 02 686 22 695 37	'468 87 '486 29 '503 99 '521 96 '540 20	184 86 176 38 167 58 158 48 149 00	'675 27 '684 51 '693 72 '702 84 '711 96	°490 41 °508 14 °526 13 °544 37 °562 96	45 46 47 48 49
50	154 80	713 52	558 72	139 19	'721 00	*581 81	50
51	144 97	722 50	577 53	129 01	'729 97	*600 95	51
52	134 78	731 41	596 63	118 43	'738 89	*620 46	52
53	124 23	740 24	616 01	107 48	'747 71	*640 23	53
54	113 33	748 98	635 65	096 15	'756 44	*660 30	54

OM(5) LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x $3\frac{1}{2}$ per cent.

\boldsymbol{x}	$\log a_x$	$\log \mathrm{A}_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
55	1°102 04	7.757 61	2.655 57	1.084 36	7.765 10	2.680 73	55
56	°090 35	.766 14	.675 79	.072 18	.773 63	.701 46	56
57	°078 26	.774 56	.696 30	.059 56	.782 06	.722 49	57
58	°065 77	.782 86	.717 09	.046 50	.790 36	.743 87	58
59	°052 86	.791 03	.738 17	.032 98	.798 54	.765 56	59
60	°039 53	'799 08	759 55	°019 03	'806 57	'787 54	60
61	°025 76	'806 98	781 22	°004 58	'814 47	'809 90	61
62	°011 56	'814 72	803 16	0°989 64	'822 23	'832 60	62
63	0°996 92	'822 33	825 41	°974 20	'829 84	'855 63	63
64	°981 81	'829 75	847 94	°958 26	'837 28	'879 02	64
65	'966 26	*837 °3	'870 77	'941 82	*844 55	'902 73	65
66	'950 26	*844 13	'893 87	'924 86	*851 65	'926 78	66
67	'933 79	*851 °5	'917 26	'907 37	*858 57	'951 21	67
68	'916 86	*857 80	'940 94	'889 32	*865 33	'976 01	68
69	'899 46	*864 35	'964 89	'870 75	*871 89	T'001 13	69
70	*881 59	*870 71	°989 12	.851 60	'878 27	°026 66	70
71	*863 27	*876 90	1°013 63	.831 91	'884 45	°052 54	71
72	*844 48	*882 88	°038 40	.811 65	'890 44	°078 78	72
73	*825 24	*888 67	°063 43	.790 83	'896 24	°105 41	73
74	*805 55	*894 25	°088 70	.769 44	'901 83	°132 39	74
75	'785 42	*899 64	114 22	'747 47	'907 23	159 78	75
76	'764 86	*904 84	139 98	'724 91	'912 44	187 52	76
77	'743 87	*909 82	165 95	'701 78	'917 44	215 66	77
78	'722 48	*914 61	192 13	'678 09	'922 24	244 15	78
79	'700 71	*919 21	218 50	'653 81	'926 85	273 05	79
80	678 56	'923 60	245 04	.628 96	'931 25	302 29	80
81	656 07	'927 79	271 72	.603 58	'935 46	331 89	81
82	633 27	'931 79	298 52	.577 61	'939 48	361 88	82
83	610 16	'935 61	325 45	.551 08	'943 31	392 22	83
84	586 76	'939 23	352 47	.523 98	'946 96	422 98	84
85	'563 12	'942 67	'379 55	*496 35	°950 42	*454 08	85
86	'539 34	'945 92	'406 58	*468 23	°953 71	*485 48	86
87	'515 35	'949 01	'433 66	*439 54	°956 82	* *517 28	87
88	'491 31	'951 91	'460 60	*410 42	°959 75	*549 33	88
89	'467 18	'954 65	'487 47	*380 79	°962 53	*581 73	89
90	*442 93	'957 24	514 31	'35° 54	*965 15	°614 61	90
91	*418 98	'959 65	540 67	'32° 17	*967 59	°647 42	91
92	*394 70	'961 94	567 24	'288 83	*969 93	°681 10	92
93	*371 31	'964 03	592 72	'257 99	*972 06	°714 07	93
94	*347 17	'966 04	618 87	'225 52	*974 13	°748 61	94
95 96 97 98 99	'324 63 '301 05 '280 93 '260 08 '229 81	'967 82 '969 58 '971 01 '972 41 '974 36	643 19 668 53 690 08 712 33 744 55	194 38 161 01 131 52 100 13	*975 97 *977 80 *979 29 *980 77 *982 76	°781 60 °816 79 °847 76 °880 64 °929 14	95 96 97 98 99
100	*189 52	.976 71	'787 19	7·989 06	°985 18	°996 12	100
101	*121 05	.980 26	'859 21	·871 30	°988 75	0'117 44	101
102	*000 00	.985 06	'985 06	·617 44	°993 76	°376 32	102

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	10	II	12	13	14	15	16	17	18	19	Dura-
tion.	21.563	21:455	21:344	21.229	21.109	20.985	20.857	20.724	20.587	20.445	tion.
0	,000	.000	.000	.000	.000	°000	.000	*000	,000	.000	0
1	.060	.060	.060	.000	.960		*960	•960	.060	.060	1
2	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.881	1.881	2
3	2.768	2.768	2.767	2.767	2.767	2.767	2'767	2.766	2.766	2.766	3
4	3,618	3.018	3.617	3.617	3.617	3.616	3.616	3.616	3.612	3.612	4
5	4'434	4.434	4.433	4.433	4.432	4°432	4'431	4,431	4.430	4.429	5
6 7	5.518	5.060	5,369	5.516	5.215	5.312	5.514	5.513	5.515	5°961	6 7
8	5'970	6.692	6.601	5.968	6.688	6.687	5°965 6°686	5.964	5.962	6.681	8
9	7.386	7.385	7'384	7.382	7.381	7'379	7.377	7'375	7'373	7'371	9
10	8.021	8.020	8.049	8.047	8.045	8.043	8.041	8.039	8.036	8.033	10
1	8.690	8.689	8.687	8.685	8.683	8.680	8.678	8.675	8.672	8.668	1
2	9.304	9'302	9,300	9.297	9.294	9'291	9.288	9°285	9'281	9°277.	2
3	9.892	9.890	9.887	9.884	9.881	9.878	9.874	9.870	9.866	9.861	3
4	10'457	10.454	10.451	10.448	10'445	10,441	10.436	10'432	10'427	10.421	4
15	10,000	10.036	10'993	10'989	10.985	10'980	10.975	10'970	10'964	10.958	15
6	11.219	11.216	11.212	11.207	11.203	11.497	11'492	11.486	11.479	11.472	6
7	12'018	12'014	12.010	12'005	11.999	11'994	11.987	11,081	11'973	11.962	7
8	12'497	12.492	12°487	12°482	12.476	12.469	12.462	12'455	12.446	12'437	8
9	12.956	12.951	12.945	12.939	12.033	12.922	12.917	12,000	12.899	12.889	9
20	13'396	13,391	13.385	13.378	13'370	13'362	13'353	13'344	13'333	13,321	20
1	13.819	13.812	13.806	13.798	13.790	13.480	13.771	13'760	13'748	13.735	1
2	14.554	14'217	14.500	14.501	14.195	14.181	14°171	14.129	14'146	14'132	2
3	14.612	14.604	14.296	14.284	14.277	14.262	14.223	14.240	14.256	14.210	3
4	14.084	14.976	14.966	14.956	14.945	14.933	14'920	14'906	14.890	14.873	4
25	15°341	15.331	15,351	15.310	15.508	15.582	15.520	15.252	15,538	12,510	25
6	15.685	15.672	12.661	15.649	15.636	15.621	15.606	15.289	15.240	15.249	6
7	16.009	15.998	15'987	15.973	15.959	15.943	15.926	15.008	15.887	15.865	7
8 9	16.323	16.311	16.508	16.284	16.268	16'251	16.232	16.213	16,130	16,166	8
	16.623	16.610	16.296	16.280	16.263	16.245	16.25	16.203	16.479	16.453	_
30	16.910	16.896	16.881	16.864	16.846	16.826	16.804	16.481	16.755	16.727	30
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	17.185	17'170	17'153	17.135	17'115	17.094	17'070	17.045	17.017	16.987	1 2
3	17.447	17.431	17.413	17°394 17°641	17.373	17'349	17.324	17.297	17.505	17.235	3
4	17'939	17.920	17.899	17.877	17.852	17.826	17.797	17.765	17.731	17.693	4
35	18.168	18.148	18.159	18.105	18.076	18.047	18.016	17.982	17.046	17.905	35
6	18.387	18.365	18.342	18.316	18.588	18.257	18.224	18.188	18.149	18.100	6
7	18.595	18.572	18.547	18.20	18.490	18.457	18.422	18.384	18.342	18.500	7
8	18.794	18.770	18.743	18.714	18.685	18.647	18.610	18.269	18.24	18.476	8
9	18.984	18.958	18.929	18.898	18.864	18.827	18.787	18.744	18.696	18.645	9
40	19.162	19'137	19.106	19.073	19.037	18.998	18.955	18.909	18.859	18.804	40
1	19'336	19.307	19'275	19.539	10,501	19,129	19'114	19.065	19.015	18.954	1
2	19.200	19:468	19.434	19.396		19.311	19.264	19.515	19.126	19.095	2
3	19.655	19.621	19.585	19.545	19.202	19.455	19'405	19.320	19.591	19,559	3
4	19.802	19.766	19.728	19.686	19.640	19.291	19.537	19.480	19'417	19.349	4
45	19.941	19.903	19.863	19.818	19'770	19.718	19.662	19.601	19'535	19.463	45
6	20.013	20.033	19,000	19'943	19.893	19.837	19.778	19.714	19.644	19.269	6
7	20'197	20,122	20,110	20.000	20'007	19'949	19.887	19.819	19.746	19.668	7
8 9	20'314	20.270	20.553	20'170	20.114	20.023	19.988	19.917	19.841	19.758	8 9
	20.422	20.378	20.358	20.543	20.512	50,120	20.085	50,008	19.028		
	10	11	12	13	14	15	16	17	18	19	

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

 $3\frac{1}{2}$ PER CENT.

_			ALIUES		MII OILA		INUITI	LIS OF		O 2 c	ENI.
Dura-	20	21	22	23	24	25	26	27	28	29	Dura-
tion.	20.299	20.147	19.990	19.829	19.662	19:489	19.311	19.127	18.938	18.743	tion.
0	.000	.000	.000	.000	.000	000	1000	.000	*000	.000	0
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	1.881	1.881	1.881	1.881	.960	1,880	°959	'959 1'880	'959 1'879	959	1 2
3	2.765	2.765	2.765	2.764	2.764	2.763	2.763	2.762	2.761	2.761	3
4	3.614	3.613	3.613	3.615	3.611	3.610	3.610	3.608	3.607	3.606	4
5	4.428	4.427	4.427	4.422	4.424	4.423	4°422	4°420	4.418	4°417	5
6	5.510	5°208	5°207	5.500	5°204	5°202	5'200	5.108	5.196	5°193	6
8	5°959 6°679	6.676	5°956 6°674	5°954 6°671	6.669	5°949 6°665	5°947 6°662	5°944 6'658	5°941 6°654	5°937 6°650	8
9	7.368	7.366	7.363	7.359	7.356	7.352	7:348	7°343	7.338	7.332	9
10	8.030	8.027	8.023	8.010	8.012	8,010	8.002	7'999	7'992	7.985	10
1	8.665	8.660	8.656	8.651	8.646		8.634	8.627	8.619	8.611	1
2 3	9°273 9°856	9°268 9°850	9°263 9°844	9°257 9°837	9.830	9°244 9°822	9.813	9.803	9'219	9.210	3
4	10.412	10.409	10'402	10.393	10.382	10.372	10.362	10,324	10'342	10,358	4
15	10.021	10.943	10.932	10°926	10,016	1.0*905	10.893	10.880	10.866	10.821	15
6	11.464	11.455	11.446	11.436	11.425	11'412	11,308	11.384	11,368	11.320	6
7 8	11.950	11'946	11'935	11,053	11'911	11.897	12'343	12,324	11.846	11.827	8
9	12.877	12.865	12.852	12.837	15.851	12.803	12.784	12.763	12.740	12.715	9
20	13'309	13*295	13°280	13'263	13.246	13.556	13'204	13,181	13°155	13.128	20
1	13'722	13.406	13.690	13.671	13.621	13.629	13.606	13.280	13.252	13.21	1
3	14.119	14.099	14'081	14.001	14'039	14.012	13.988	13.000	13.929	13.895	3
4	14'494	14'475	14.455	14.432	14.408	14°382 14°732	14.353	14.322	14.628	14.220	4
25	15.198	15.176	15.12	15.125	15.097	15.065	15.030	14.993	14.952	14.908	25
6	15.27	15.203	15.476		15.416	15.382	15'344	12,303	15.259	15,511	6
8	15.841	16.111	15.486	15.754	16.000	15.683	15.642	15.877	15.825	15.498	8
9	16.425	16'394	16.360	16.353	16.584	16.540	16,105	16.141	16.082	16.024	9
30	16.696	16.662	16.626	16.587	16.244	16.497	16.446	16.390	16.330	16.265	30
1	16.954	16.018	16.879		16.490	16.740	16.682	16.626	16.261	16.491	1
3	17'199	17.160	17'119	17.073	17.024	16.969	16,011	16.847	16.778	16.704	3
4	17.432	17.608	17.346	17.297	17.452	17.390	17.123	17.055	17.172	17.088	4
35	17.862	17.815	17.763	17.707	17.647	17.281	17.210	17.433	17.350	17.260	35
6	18.000	18.000	17.955	17.895	17.831	17.761	17.686	17.604	17.216	17.420	6
8	18.247	18,369	18.135	18.072		17.929	17.849	17.763	17.669	17.569	8
9	18.289	18.23	18.304	18.392		18.086	18.143	17.910	17.812	17.705	9
40	18.745	18.681	18.613	18.537	_	18.368	18.274	18.172	18.063	17.946	40
1	18.893	18.824	18.751	18.672	18.286	18.494	18.395	18.588	18.174	18.020	1
. 2	19.029	18.957	18.880	18.797	18.707	18.610	18.206	18.394	18.274	18.146	2
3 4	19°157	19,081	10,111	18.019	18.818	18.814	18.607	18.490	18.365	18.308	3 4
45	19.386	19,303	19'214		19'014	18'902	18.783	18.656	18.20	18'376	45
6	19.489	19,401	19.308	19.207	10.000	18.083	18.859	18.727	18.286	18.436	6
7	19.283	19.491	19.394		19.176	19.055	18.926	18.789	18.643	18.489	7
8 9	19.670	19.574	19'472	19'362	19'245	19.120	18.987	18.845	18.694	18.534	8 9
	7 179	7 779	- 5 543								
	20	21	22	23	24	25	26	27	28	29	

 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

									2		CENI.
Dura-	30	31	32	33	34	35	36	_ 37	38	39	Dura-
tion.	18.542	18.336	18.123	17.904	17.680	17.449	17.212	16.969	16.720	16:465	tion.
0	.000	.000	000	000°	.000	.000	.000	.000	.000	.000	0
1	959	'959	959	'958	958	*958	.958	958	'957	957	1
2	1.848	1.878	1.878	1.877	1.876	1.876	1.875	1.874	1.874	1.873	2
3	2.760	2.759	2.758	2.757	2.756	2.752	2.753	2.752	2.750	2.748	3
4	3.605	3.003	3.002	3.600	3.208	3.296	3.594	3.201	3.289	3.286	4
5	4.414	4.412	4.410	4.407	4.404	4.401	4.398	4°394	4°390	4.386	5
6	5.100	5'187	.5'184	2,180.	5.176	5°172	5.164	5,165	2,129	5,120	6
7	5.933	5.929	5.925	5.920	5'914	5.908	5.902	5.895	5.887	5.879	7
8	6.645	6.640	6.634	6.627	6.620	6.613	6.602	6.292	6.286	6.272	8
9	7.326	7.319	7.312	7.304	7.295	7.286	7.275	7.264	7.252	7.538	9
10	7'978	7.970	7.961	7.951	7.940	7.929	7.916	7.902	7.887	7.870	10
1	8.602	8.592	8.281	8.269	8.256	8.542	8.227	8.210	8.492	8.472	1
2	9,108	9.184	9.174	9,160	9'144	9,158	0,110	0.000	.9*068	9.042	2
3	9.769	9.755	9'740	9'723	9.705	9.686	9.665	9.641	9.919	9.289	3
4	10.314	10.538	10,580	10,591	10.540	10.518	10.193	10,199	10.134	10,102	4
15	10.834	10.819	10.796	10.774	10.750	10.724	10.696	10.662	10.633	10.202	15
6	11,331	11'310	11.584	11.565	11.532	11,500	11.14	11,130	11,101	11.020	6
7	11.802	11.481	11.755	11.727	11.697	11.664	11.627	11.288	11.242	11.498	7
8	12.257	12.530	12,501	12.140	12,132	15,008	12.028	12,013	11.962	11,013	8
9	12.687	12.628	12.625	12.290	12.22	12.210	12.465	12.416	12.365	12.304	9
20	13.097	13.064	13.029	12'989	12'947	12.001	12.821	12.796	12.737	12.673	20
1	13.487	13.451	13.411	13.368	13.351	13.540	13.512	13.122	13.000	13.019	1
2	13.858	13.818	13.774	13.726	13.675	13.619	13.228	13'492	13.421	13.344	2
3	14.510	14.166	14.118	14.066	14.000	13.048	13.885	13.810	13.435	13.648	3
4	14.244	14.496	14.443	14.386	14.322	14.228	14.186	14.108	14'023	13.931	4
25	14.860	14.807	14.751	14.689	14.622	14.220	14'471	14.386	14.295	14.199	25
6	15.120	15'102	15.040	14.973	14.001	14.853	14.738	14.646	14.247	14.441	6
7	15.441	15.380	15.313	15'241	12,163	15.049	14.987	14.889	14.482	14.668	7
8	15.408	15.642	15.240	15'492	15.408	15.314	12,510	15.114	12,000	14.877	8
9	15.959	15.888	12.811	15.727	15.637	15.240	15.435	12.322	12,500	15.069	9
30	16.192	16.118	16.036	15'946	15.850	15.746	15.634	15.214	15.384	15'245	30
1	16.416	16.334	16.546	16.120	16.047	15.937	15.818	12.690	15.22	15.406	1
2	16.623	16.236	16.442	16.340	16.530	16.113	15.987	15.821	15.400	12.221	2
3	16.819	16.424	16.623	16.212	16.399	16.275	16.141	15.998	15.845	15.682	3
4	16.996	16.898	16.792	16.677	16.224	16.423	16.585	19,131	15.970	15.799	4
35	17.163	17.059	16.947	16.859	16.696	16.228	16.409	16.521	16.085	15.003	35
6	17.318	17.208	17.089	16.962	16.825	16.680	16.24	16.328	16.185	15.995	8
7	17.461	17.344	17.219	17.082	16.945	16.790	16.627	16.454	16.270	16.076	7
8	17.292	17.469	17.338	17.198	17.048	16.888	16.719	16.238	16.348	16:146	8
9	17.711	17.283	17.446	17.299	17.142	16.976	16.800	16.613	16.415	16.504	
40	17.821	17.686	17.543	17.389	17.226		16.871	16.677	16.473	16.228	40
1	17.919	17.779	17.629	17.470	17.301	17.122	15.932	16.732	16.22	16.301	1
2	18.000	17.862	17.707	17.541	17.366	17.181	16.982	16.780	16.263	16.338	2
3	18.088	17.936	17.775	17.603	17.422	17.232	17'031	16.819	16.598	16:367	3 4
4	18.120	18.003	17.835	17.658	17.471	17.275	17.069	16.852	16.626	16.391	
45	18.555	18.059	17.887	17.704	17.213	17.311	17.100	16.880	16.649	16.410	45
6	18.277	18.100	17.931	17.744	17.248	17.345	17.126	16.902	16.668		6 7
7	18.325	18.12	17.970	17.778	17.577	17.367	17.148		16.682	16.437	8
8	18.366	18.189	18.002	17.806	17.601	17.387	17.164	16.933	16.693	16.445	9
9	18.401	18.519	18.029	17.828	17.620	17.403	17.177	16.943	16.401	10 452	
	30	31	32	33	34	35	36	37	38	39	
	1	- 3-	1	- 33		1 33					

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VALUES OF TEMPORARY ANNUITIES OF 1

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										04	OLIVI.
Dura-	40	41	42	43	44	45	46	47	48	49	Dura-
tion.	16.204	15.937	15.664	15.385	15.100	14.810	14.514	14.213	13.908	13.597	tion.
0	.000	000	.000	.000	*000	.000	.000	*000	.000	.000	0
1 2	°957	. 956	1.869	*956 1*868	°955	°955 1°865	°954 1°864	'953 1'862	°953	'952 1.858	1 2
3	2.746	2.744	2.742	2.739	2.737	2'734	2.730	2.727	2.723	2:718	3
4	3.282	3.579	3.575	3.21	3.266	3.261	3.226	3.249	3.243	3.236	4
5	4.381	4'375	4.369	4.363	4°356	4.349	4°340	4'331	4.321	4.311	5
6	5'143	5.135	5.127	5.118	5.108	5.098	5.086	5.074	5.060	5°045	6
8	5.870 6.263	5.860	5.849 6.236	5.837	5.824	5.810 6.486	5°795 6°466	5.778 6.445	5°759 6°421	5'740	8
9	7.223	7.207	7.190	7.176	7.120	7.127	7.103	7.076	7.046	7.016	9
10	7.852	7.832	7.811	7.788	7.762	7.735	7.705	7.672	7.636	7.598	10
1	8.450	8.427	8.401	8.373	8.342	8.309	8.273	8.234	8,191	8.142	1
2	9,019	8.991 9.26	8.960	8.927	8.891	8.852	8.810	8.764	8.713	8.659	2
3 4	9'559	10,033	9'490	9°452 9°947	9.899	9°364 9°846	9.315	9'261	9.203	9.289	3 4
15	10,222	10.212	10.465	10,412	10.320	10,300	10.532	10,162	10.088	10.002	15
6	11.014	10.962	10,015	10.822	10.495	10.722	10.62	10.242	10.487	10.395	6
7	11.447	11.392	11.333	11.268	11,108	11,153	11.041	10.925	10.826	10'754	7
8 9	11.856	11'795	11.428	11.626	11.248	11.494	11.403	11.302	11.108	11.082	8
			12.446	12.328	11,033	11.840	11.439	11.031	11.214	11.998	
20	12.003	12.859	12'770	12.674	12.203	12.428	12.020	11,035	12.060	11.008	20
2	13.260	13.169	13.072	12.967	12.853	12'732	13.601	12.461	12,310	12.121	2
3	13.226	13.458	13.352	13.538	13.112	12.983	12.842	12.691	12.23	12.328	3
4	13.835	13.726	13.611	13.488	13.355	13.514	13.065	12.900	12.726	12.243	4
25	14.089	13.974	13.850	13.718	13.575	13.423	13.561	13.088	12.003	12.708	25
6 7	14.326	14'202	14'070	13 920	13.776	13.485	13.440	13.726	13,100	12.854	6 7
8	14.746	14.604	14.454	14.593	14.151	13.938	13'744	13.238	13,351	13.093	8
9	14.929	14.779	14.619	14.449	14.267	14.024	13.840	13.654	13.427	13.188	9
30	15.097	14.938	14.769	14.289	14'397	14.192	13.981	13.755	13.218	13.270	30
1 2	15.385	15.081	14,002	14.413	14.213	14.301	14.077	13.842	13.262	13.339	1 2
3	15.208	12.353	12,15.	14.023	14.701	14 393	14'160	13.979	13.715	13'443	3
4	15.616	15.423	15.510	15.004	14.777	14.239	14.500	14.030	13.760	13.481	4
35	15.413	15.211	15.299	15.076	14.841	14.596	14.340	14.073	13.796	13.211	35
6	15.797	15.288	15.368	15.137	14.896	14.643	14.380	14.108	13.825	13.232	6
8	15.870	15.054	15'427	15.189	14'941	14.682	14.413	14.132	13.847	13.266	7 8
9	15.987	15.758	15.218	15.568	15.008	14.739	14'460		13.878		9
40	16.033	15.797	15.552	15'297	15.032	14.758	14.476	14.186	13.887	13.284	40
1	16.041	15.830	15.579	15.319	15.020	14.773	14.488	14.192	13.894	13.289	1
3	16.152	15.856	12.618	15.337	15.046	14.784	14.496	14.201	13.899	13.292	2 3
4	16.147	15.893	15.631	15.321	15.083	14'793	14.503	14 200		13.296	4
45	16.165	15.006	15.641	15.369	15.089	14.803	14.210	14.511	13.906	13.296	45
6	16.174		15.648	15.374	15.093	14.806	14.212	14.515	13.000	13.297	6
7		15.922	15.653	15.378	15.096	14.807	14.213	14.213		13.597	7
8 9	16.192	15.030	15.660	15.381	15.098	14.809	14.514	14.213	13.907	13.597	8
									48		
	40	41	42	43	44	45	46	47	40	49	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	50	51	52	53	54	55	56	57	58	59	Dura-
tion.	13:282	12.963	12.639	12:312	11.982	11.649	11:313	10.975	10.635	10.294	tion.
0	'000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	.021	.950	'949	1948	'947	'946	945	*943	'942	'940	1
2	1.855	1.853	1.820	1.847	1.843	1.840	1.836	1.831	1.827	1'821	2
3	2.714	2.709	2.403	2.697	2.690	2.683	2.675	2'666	2.657	2.647	3
4	3.258	3.219	3,210	3,200	3.489	3'477	3,463	3°449	3°434	3.417	4
5	4.299	4.586	4.575	4.257	4.241	4.553	4'203	4.185	4.120	4'134	5
6	5.058	2.011	4'991	4.970	4.947	4.923	4.895	4.866	4.834	4.800	6
7	5.418	5.694	5.668	5.641	5.610	5.578	5.242	5.203	5.461	5.416	7
8	6.368	6.338	6.302	6.269	6.531	6.189	6.143	6.643	6.041	5.984	8
9	6.980	6'943	6.902	6.858	6.810	6.758	6.702	6.642	6.246	6.206	
10	7.555	7.210	7.460	7.407	7:349	7.287	7.219	7.146	7.068	6.984	10
1	8.095	8.041	7.982	7.919	7.850	7.776 8.227	7.696 8.134	7.610 8.034	7:518	7.418	2
2	8.600	8.537	8.468	8·393 8·833	8.313	8.641	8.534	8.420	7.927 8.298	8.168	3
3 4	9.071	8.998	8.918	9°238	9.133	0.051	8.899	8.770	8.632	8:486	4
	9.210	9.427	9.336					9.086	8.932	8.769	15
15	9.018	9.823	9.720	9.910	9°492 9°819	9°366 9°678	9.230	9.368	0,108	9,019	6
6 7	10.502	10,180	10'074	9,921	10,112	9.960	9.795	9.619	9'434	9.538	7
8	10.043	10.222	10.291	10'542	10,385	10,513	10.032	9.842	9.640	9'428	8
9	11.255	11'112	10.028	10.795	10.651	10.438	10'242	10.036	9.820	9.593	9
20			11,100	11,055	10.834	10.636	10'426	10.500	9'974	9.732	20
1	11.21	11.365	11.414	11.224	11.022	10,810	10,286	10,321	10,100	9.850	1
2	11,080	11.294	11.606	11'402	11.182	10,061	10'723	10.475	10'217	9°948	2
3	12°174	11,081	11.775	11.229	11,330	11.005	10.841	10.280	10,300	10.050	3
4	12'347	12'142	11'924	11.694	11.454	11'203	10.940	10.667	10.382	10'094	4
25	12.201	12.583	12.023	11.811	11.229	11'296	11,055	10.739	10°446	10.146	25
6	12.635	12'405	12.164	11,011	11.647	11.374	11.089	10.797	10.495	10.189	6
.7	12.751	15.211	12.528	11.995	11.721	11.438	11.144	10.843	10.233	10,518	7
8	12.852	12.601	12.338	12.065	11.782	11.490	11.188	10.879	10.263	10'241	8
9	12'937	12.677	12'404	12.153	11.831	11.231	11.555	10.907	10.282	10.228	9
30	13,010	12.740	12.459	12'169	11.870	11.263	11.248	10.927	10.601	10.541	30
1	13.070	12.792	12.203	12.206	11.900	11.288	11.568	10.943	10.613	10'279	1
2	13.110	12.834	12.238	12.235	11.924	11.606	11.585	10.954	10.651	10.582	2
3	13'159	12.867	12.266	12.257	11.941	11.050	11.505	10.061	10.656	10,580	3
4	13,101	12.893	12.287	12.274	11'954	11.630	11,300	10,066	10.630	10.501	4
35	13.215	12'913	12.603	12.586	11.964	11.634	11.304	10.970	10.635	10,533	35
6	13.532	12.928	12.614	12.295	11.970	11.641	11.308	10.972	10.633	10,533	6
7	13.549	12.939	12.623	12.301	11.974	11.644	11,310	10.973	10.634	10'294	7
8	13'259	12'947	13.629	12.302	11.977	11.646	11,311	10.974	10.635	10'294	8
9	13.564	12.953	12.632	12.308	11.979	11.647	11,315	10.974	10.632	10,534	9
40	13.575	12'956	12.635	12.310	11.080		11,315	10.974	10.635	10°294	40
1	13.276		12.637			11.648	11,315	10.975	10.635	10'294	1
2	13.278	12.960		12,311	11.081	11.649	11.312	10.975	10.635	10'294	3
3	13.580	12.961	12.638		11.081	11.649	11,315	10'975	10.635	10'294	0
4	13.580	12'962	12.639	12,312	11.081	11.649	11,315	10.975	10.635		
45	13.581	12.962	12.639	12,315	11.081	11.649	11.313	10.975		50	
. 6	13.581	12'962	12.639		11.081	11.649	11.313	57	51		
8	13,581	12.962	12.639	12,315	11.085	11.649		52		13.282	
9	13,581	12.962	12.639	12,312	11 902				12.963	13.585	52
1	13 201	12 902	12 039	3.2				12.639	12.963	13.585	1
								12.639	12.963	13.581	50
	50	51	52	53	54	55	56	52	51	50	
	30	32	1 32	33	1 34	1 33	30	3-	J-	30	

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VALUES OF TEMPORARY ANNUITIES OF 1

0			111101110							020	JENI.
Dura-	60	61	62	63	64	65	66	67	68	69	Dura-
tion.	9.953	9.611	9.270	8.929	8.590	8.253	7.918	7.586	7.258	6.933	tion.
0	.000	,000	000°	.000	.000	,000	.000	.000	.000	.000	0
1	.938	.936	·934	.931	. 928	925	922	.919	.912	.911	1
2	1.819	1.810	1,803	1.796	1.788	1.779	1.769	1.759	1.748	1.736	2
3	2.632	2.623	2.610	2.295	2.280	2.263	2.244	2.24	2.203	2.479	3
4	3.398	3.378	3.357	3,333	3.308	3.580	3.520	3.518	3,183	3'145	4
5	4.104	4.077	4.045	4.011	3'973	3.933	3.890	3.843	3.792	3.438	5
6	4.762	4.722	4.678	4.631	4.280	4.525	4.466	4.403	4'335	4.565	6
7	5:367	5°314	5°257	5.192	5'129	5.028	4.982	4.901	4.814	4.451	7
8	5'922	5.856	5.784	5'7°7 6'168	5.624	5.236	5.442	5.341	5'234	5'120	8
9	6.430	6.349	6.600		6.068	5.961	5.847	5.727	5.299	5.464	9
10	6.893	6.796	6.692	6.248	6.811	6.666	6.203	6.062	5'913	5.756	10
1	7.312	7.198	7.077	6.948	7'117	6.666	6.215	6.321	6.181	6.003	1
2 3	8.038	7°559 7°880	7.420	7.273	7.382	6.952 7.198	7.006	6·597 6·804	6.294	6.209	3
4	8.329	8.164	7.989	7.805	7'611	7.408	7.197	6.977	6.749	6·377 6·514	4
	8.29	8.413	8.550	8.018	7.806	7.585	7.356		6.874	6.622	15
15 6	8.829	8.629	8.419	8.199	7.970	7 5 0 5	7.487	7'119	6.973	6.404	6
7	9.031	8.812	8.288	8.325	8.102	7.854	7.593	7'325	7.021	6.773	7
8	9.306	8.974	8.731	8.480	8.550	7.952	7.677	7.396	7'111	6.822	8
9	9.355	9,107	8.850	8.584	8.310	8.029	7.743	7.451	7.126	6.858	.9
20	9.480	9,518	8.948	8.669	8.383	8.000	7.793	7.492	7.188	6.884	20
1	9.584	9.310	9'027	8.736	8.439	8.132	7.831	7.523	7.212	6.007	1
2	9.670	9.384	9,090	8.789	8.483	8.172	7.859	7.544	7.229	6'914	2
3	9.739	9.443	9.139	8.829	8.216	8.198	7.879	7.559	7.240	6.922	3
4	9.795	9.489	9.177	8.860	8.240	8.217	7.893	7.569	7.247	6.927	4
25	9.838	9.524	9'205	8.882	8.557	8.230	7'903	7.576	7'252	6.930	25
6	9.871	9.551	9.226	8.898	8.269	8.238	7.909	7.580	7.254	6.932	6
7	9.896	9.570	9.241	8.909	8.577	8.244	7.913	7.583	7.256	6.933	7
8	9'914	9.584	9.521	8.917	8.285	8.248	7.915	7.584	7.257	6.933	8
9	9.927	9°594	9.228	8.922	8.282	8.220	7.916	7.585	7'257	6.933	9
30	9.936	9.600	9.263	8.925	8.284	8.221	7.917	7.586	7.258	6.933	30
1	9'943	9.602	9.266	8.927	8.289	8.252	7.918	7.586	7.258	6.933	1
2	9.947	9.607	9.267	8.928	8.589	8.252	7.918	7.586	7.258	6.933	2
3	9'949	9,609	9.568	8.929	8.590	8.252	7.918	7.586	7.258	6.933	3
4	9,921	9.610	9.269	8.929	8.290	8.523	7.918	7.586	7.258	69	
35	9'952	9.611	9.269	8.929	8.290	8.523	7'918	7.586	68	40	
6	9.952	9.611	9.270	8.929	8.590	8.253	7.918	67	41	40	
7 8	9.952	9.611	9.270	8:929	8.290	8.223	66	42		16.204	
9	9.953	9.611	9.270	8.929	8·590 64	65	43		15.937	16.304	62
40	9'953	9.611	9270	63		44		15.664	15.937	16.504	1
1	9'953	9.611	62	====	45		15.385	15.664	15.937	16.304	60
2	9°953 9°953	61		46	14.810	15.100	15.385	15.664		16°204	59
	60		47	14.514	14-810	15.100	15.382	15.663		16°204	8
		48	14.213	14 914	14.810	15.100	15.382	15.663	15.936	16'204	7
	49	13.908		14.214	14.810	12,100	15.382	15.663	15.036	16.304	6
	13.597	-	14.513	14.214	14.810	12,100	15.382	15.663	15.936	16.503	5
		13.008	14.513	14.214	14.810	12,100	15.382	15.663	15.036	16.503	54
53	13.297	13.008	14.513	14.214	14.810	12,100	15.385	15.663	15.936	16°203	3
2	13.597	13'907	14.513	14.214	14'810	12,100	15.384	15.663	15.935	16.505	2
1 50	13.597	13.907	14'213	14'514	14.810	12,100	15.384	15.662	15.934	16.708	1 50
-00	13.297	13.907	14.513	14.214	14.810	12.000	15.383	12.661	15.933	16.198	50
	49	48	47	46	45	44	43	42	41	40	

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VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	70	71	72	73	74	75	76	77	78	79	Dura-
tion.	6:614	6.299	5.990	5.687	5.391	5.101	4.819	4.545	4.278	4.020	tion.
0	.000	000°	.000	.000	'000	.000	.000	000	,000	.000	0
1	906	106.	1.693	1.676	·884 1·658	1.639	1,818	.861	852	*843	1 2
3	2°454	2.427	2°397	2.365	2,331	2.292	2.252	2.213	1'570	2°120	3
4	3.102	3.001	3.012	2.965	2,011	2.854	2.793	2.728	2.659	2.286	4
5	3.680	3.918	3.221	3.480	3°405	3.322	3°240	3.120	3.026	2.958	5
6	4.184	4°101	4.013	3.050	3.821	3'717	3.607	3'493	3'373	3.548	6
7 8	5.000	4.873	4.407	4°290 4°599	4°168 4°452	4.300	3.905	3.765	3.810	3.471	7 8
9	5.321	5.1.75	5.012	4.852	4.683	4.207	4°327	4.145	3.923	3.762	9
10	5.202	5.421	5.242	5'057	4.866	4.670	4.469	4.265	4.028	3.820	10
1	5.818	5.625	5°425	5.550	5.000	4°794	4.276	4°355	4'133	3,011	1
3	6.003	5.790	5°572 5°686	5°348 5°446	5°120 5°202	4.888 4.957	4.654	4'420	4.182	3°953 3°980	2 3
4	6.272	6.052	5.774	5.20	5.263	5.006	4.750	4:495	4.544	3.997	4
15	6.362	6.104	5.840	5.574	5.307	5.040	4.776	4.212	4.258	4.007	15
6	6.437	6.164	5.888	5.612	5°337	5.064	4'793	4.28	4.267	4.013	6
8	6.491	6:207	5.923	5.639	5'357	5.088	4.804	4.535	4.272	4.017	7 8
9	6.231	6.239	5°947 5°963	5.658 5.670	5'371	5.094	4.811	4°54° 4°542	4.275	4.019	9
20	6.579	6.275	5.974	5.677	5.384	5.098	4.817	4'543	4.278	4.050	20
1	6.592	6.582	5.981	5.682	5.388	5.099	4.818	4.244	4.278	4°020	1
3	6.601	6.501	5.985	5.684	5.389	5,100	4.819	4.244	4°278	4'020	$\frac{2}{3}$
4	6.606	6.295	5°987 5°989	5.686 5.687	2,391	2,101	4.819	4°544 4°545	4°278 4°278	4'020 79	3
25	6.611	6.508	2,080	5.687	2,391	2,101	4.819	4°545	78		
6	6.613	6.299	5.990	5.687	5,391	2.101	4.819	77	27	30	
7	6.613	6.599	5,990	5.687	5,391	2,101	76	32	31	18:542	
8 9	6.613	6.599	2,990	5.687	5'391 74	75	33		18.336	18.242	72
30	6.614	6.500	2.990	73		34		18.123	18.336	18.542	1
1	6.614	6.299	72		35	17.680	17.904	18.153	18.336	18.542	70
2	6.614	71	27	36	17.449	17.680	17.904	18.153	18.336	18.542 18.542	69 8
	70	38	37	17.212	17.449	17.680	17'904	18.153	18.336	18.542	7
	39		16.969	17'212	17.449	17.679	17.904	18.153	18.336	18.542	6
	16.465	16.720	16.969	17.212	17.449	17.679	17.904	18.153	18.336	18.242	5
63	16.465	16.720	16.969	17.212	17.449	17.679	17.904	18.153	18.335	18.541	84
2	16.465	16.720	16.969	17'212	17.449	17.679	17.904	18.153	18.332	18.241	2
1	16.465	16.720	16.969	17.212	17.449	17.679	17.904	18.155	18.334	18.240	1
60	16.462	16.720	16.969	17.515	17.449	17.679	17.903	18.155	18.333	18.238	60
59	16.465	16.720	1 /		17:449	17.679	17.902		18.332		59 8
8 7	16.462	16.720	16.969	17.211	17.448	17.678	17.900		18.329	18.233	7
6	16.465	16.720	16.968	17.511	17.446	17.675	17.897	18.113	18.322	18.23	6
5	16.464	16.719	16.967	17.500	17.444	17.672	17.894	18.108	18.316	18.215	5
54	16:464	16.718	16.966	17.207	17.442	17.669	17.889		18.307	18.202	54
3 2	16.463	16.717	16.961	17.201	17.438	17.664	17.882	18.082	18.283	18.492	3 2
1	16.460	16.712	16.957	17.195	17.425	17.647	17.862	18.068	18.266	18.455	1.
50	16.456	16.404	16.951	17.187	17.416	17.635	17.847	18.021	18.242	18.431	50
	39	38	37	36	35	34	33	32	31	30	
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 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	80	81	82	83	84	85	86	87	88	89	Dura-
tion.	3.770	3.530	3.298	3.075	2.861	2.657	2.462	2.276	2.100	1.932	tion.
0	.000	.000	000	*000	*000	*000	.000	*000	*000	.000	0
1	.832	.821	.809	*796	.782	.767	752	.734	.716	.697	1
2	1.216	1°486	1.454	1'420	1,383	1'344	1,303	1.500	1.512	1,168	2
3	2.069	2'015	1.928	1.898	1.834	1'768	1.699	1.626	1.552	1.476	3
4	2.210	2.429	2°345	2.257	2°166	2.071	1.974	1.874	1.773	1.670	4
5	2.855	2.747	2.636	2.251	2°403	2.283	2,160	2.036	1'912	1.488	5
6	3,110	2.086	2.850	2.410	2.268	2.425	2,585	2.138	1,006	1.856	6
7	3,318	3.161	3.005	2.842	2.680	2.219	2.328	2.500	2.045	1.894	7
8	3.464	3.287	3,100	2.031	2.753	2.578	2.405	2,536	2'072	1.914	8
9	3.568	3.375	3,181	2.989	2.799	2.613	2.432	2.256	2.087	1.924	9
10	3.641	3°434	3.558	3.026	2.827	2.634	2.447	2.267	2.004	1,020	10
1	3.691	3°472	3.528	3.048	2.843	2.645	2'455	2.272	2.094	1,031	1
2	3.723	3°497	3.526	3.001	2.852	2.652	2.459	2.274	2'099	1,035	2
3			3.586	3.068	2.857	2.654	2,491	2.572	2.099	1,035	3
4	3.743	3.212			2.860	2.656	2'462	2.276	2,100		
	3.755	3.20	3.595	3.072		_				89	
15	3.763	3.25	3.592	3.074	2.861	2.657	2.462	2.276	88	20	
6	3.767	3.27	3°297	3.075	2.861	2.657	2.462	87	21		
7	3.769	3.259	3°297	3.075	2.861	2.657	86	22		20.299	
8	3.770	3.259	3.298	3.075	2.861	85	20	22	20.147	20.299	82
9	3.440	3.230	3.508	3°075	84	24	23	19.990	20°147	20.500	1
20	3.770	3.230	3.538	83	25	24	19.829	70:000	20'147	20,500	80
1	3.770	3.230	82	26	25	19.662		19.990			
2	3.770	81		26	19.489		19.829	19,990	20'147	20'299	79
	80		27	19.311		19.662	19.829	19.990	20'147	20,599	8
		28	19.127		19.489	19.662	19.828	19,000	20'147	20.299	7
	29	10,020		19,311	19.489	19.662	19.828	19,990	20'147	20.599	6
	18.743	18.938	19.122	19,311	19.489	19.665	19.828	19.990	20.142	20,599	5
		18.938	19.127	19,311	19'489	19.662	19.858	19.990	20'147	20.538	74
73	18.743	18.938	19'127	19,311	19.489	19.665	19.858	19.990	20'146	20.538	3
2	18.743	18.938	19'127	19,311	19.489	19,661	19.828	19,000	20'146	20.598	2
1	18.743	18.938	19.127	19,311	19.489	19.661	19.858	19,990	20'146	20'297	1
70	18.743	18.938	19,122	19.311	19'489	19.661	19.858	19.989	20'145	20,599	70
69	18.743	18.938	19'127	19,311	19.488	19.661	19.827	19.989	20'144	20'295	69
8	18.743	18.938	19'127	19.310	19'488	19.661	19.827	19.988	20'143	20'293	8
7	18.743	18.938	19.127	19.310	19.488		19.825	19.986	20'140	20.290	7
6	18.743	18.938	19.126	19.310	19.487	19.659	19.824	19.984	20'137	20.286	6
5	18.743	18.937	19.126	19.309	19.486	19.657	19.822	19.981	20.133	20.581	5
64	18.742	18.937	19,152	19'308	19.484	19.655	19.818	19.977	20,158	20.274	64
3	18.742	18.936	19123		19.481	19.621	19.814	19'971	20'121	20'265	3
2	18.741	18.934	10,155	19,303	19'478		10.808	19.964	20'112	20.252	2
1	18.739	18.935	10,110	19,299	19.473	19.640		19°954	20'101	20.541	1
60	18.737	18.930					19.791		20.087		
_				1	19.458		19.778	19.928	20.070	20.202	59
59	18.734	18.920	10,110	19.288					20.049	50,185	8
8	18.730		10,103			10.204	19.763	0.0	20'025	20.122	7
7	18.724	18.013	19.094		19°435		19.745	19.864		50,153	6
6		18.304	19.083		19'418		. ,	19.834	19.997	20.084	5
5	18.707	18.892	19.068	19°237	19.398		19.697				
54	18.695	18.877	19.020		19.374	19.524	19.666	19.800	19.926	20.042	54
3	18.679	18.858	19.029		19.346	19.492	19.630	19.760	19.883	19.998	3
2	18.660	18.835	19.003	19.165	19.312	19.455	19.289	19.715	19.834	19.946	2
1	18.636	18.808	18.972	19'127	19.273	19,412	19.542	19.664	19.779	19.887	1
50	18.608	18.776	18.935	19.086	19.550	19.363	19.489	19.607	19.717	19.821	50
	29	28	27	26	25	24	23	22	21	20	

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

Dura-	90	91	92	93	94	95	96	97	98	99	Dura-
tion.	1.773	1.624	1.481	1.351	1.224	1.112	1.000	•910	*820	•698	tion.
0	.000	.000	.000	.000	'000	000°	.000	.000	.000	.000	0
1	.676	.655	.630	.608	.580	.556	*524	*500	.483	°451	1
2	1,118	1.067	1,013	.960	.902	.847	785	'741		.638	2
3	1.396	1.317	1'235	1.126	1.071	'992	'912	.850	.791	.698	3
4	1.266	1.463	1.328	1.228	1.122	1.063	.969	.895	.820	99	
5	1.664	1.243	1.423	1,300	1,199	1.004	'992	.010	98		
6	1.418	1.286	1.455	1'334	1'214	1'107	1,000	97		10	
7	1.747	1.607	1.471	1'345	1.555	1,115	96		II	21.563	
8	1.461	1.617	1.478	1,320	1'224	95		12	21.455		00
9	1.768	1.022	1.481	1.321	94	~ .	13	21.344		21.263	92
10	1.441	1.624	1.481	93		14	21.229		21.455	21.263	90
1	1.225	1.024	92	16	15	21.109		21.344	21.455	21.263	
2	1.773	91	777		20.985	01,100	21,550	21.344	21.455	21.263	89
	90	18	17	20.857	20.985	51,100	21,550	51.344	21.455	21.263	8 7
	TO	10	20.724	20.857	20.985	51,100	21,558 51,558	21.344	21.455	21.263	6
	19	20.587	20.724	20.857	20.985	21,100	21,558	21'344	21.455	21.263	5
	20.445	20.284	20.724	20.857	20.082	51,100	21.558		21.455	51,265	84
83	20'445	20.284	20 724	20.857	20.985	21,100	21.558	21,344	21,455	21.262	3
2	20.442	20.284	20.724	20.857	20.985	21,100	21.558	21'344	21,455	21.262	2
1	20.445	20.284	20'724	20.857	20.985	51,100	21,558	21.343	21.454	21.262	1
80	20.445	20.284	20'724	20.857	20.985	21,108	21.558	21.343	21.454	21.261	80
79	20'445	20.287	20.724	20.857	20.984	21,108	21.222	21'343	21.453	21.260	79
8	20'445	20.284	20'724	0 6	20.984		21.554	21'342	21.452	21.220	8
7	20.445	20.284	20'724	0 (20.984	21'107	21.554	21'341	21.451	21.222	7
6	20.445	20.287	20'724	20.856	20.983	21'107	21,552	21.339	21.449	21.224	6
5	20.445	20.284	20'723	20.855	20.983	21.109	21'224	21.337	21.446	21.221	5
74	20.445	20.586	20.723	20.855	20.982	21.104	21.551	21.335	21.443	21.546	74
3	20'444	20.286	20.722	20.853	20.980	21,105	21'219	21,331	21'438	21.240	3
2	20'444	20.282	20.721	20.852	20.977	21.099	21.212	21.326	21'432	21.233	2
1	20.443	20.283	20.719	20.849	20.974	21.002	21,510	21.320	21.424	21.27	1
70	20,441	20.285	20.416	20.846	20.970	21.089	21.503	21,315	21'415	21.214	70
69	20.439	20.579	20.413	20.842	20'964	21.083	21'195	21.302	21'404	21.200	69
8	20.437	20.222	20.708	20.836	20.957	21.024	21.182	21.501	21,300	21.485	8
7	20.433	20.211	20'702	20.828	20.949	21.064	21'173	21.526	21.374	21.467	7
6	20,458	20.264	20.695	20.819	20.938	21.021	21.128	21,500	21.322	21.446	6
5	20'422	20.226	20.685	20.808	20.924	21.036	21.141	21.540	21,333	21,422	5
64	20'413	20.546	20.673	20.794	20.008	21.017	21,150	21,514	21.308	21.394	64
3	20,403	20.234	20.659	20'777	20.890	20,996	21.096	21.101	21.279	21.363	3
2	20.390	20.210	20.642	20.758	20.867	20.971	21.069	21,101	21°247	21,328	2
60	20'374	20,201	20.621	20.735		20'943	21.038	21.152	21,510	21.588	60
	20.329		20.297			20,010	21.003				_
59	20,333	20.452	20.269		20.778	20.874	20.963	21.046	21'124		59
7	20.307	20,422	20.234	20.642	20'740	20.832	20.018	20.039	21.014	21.144	8 7
8	20.545	20°354	20.200	20.602	20.640	20.786	20.812	20.890	21,019	21'086	6
5	20,505	20°310	20'412	20.207	20.649	20.678	20.815	20.827	20.894	20.955	5
54	20'157	20.565	20.360	20,421	20,236	20.010	20.690	20'759	20.853	20.885	54
3	20,100	20'207	20'302	20,390	20'472	20.248	20.619	20.685	20.746	20.803	3
2	20'050	20°147	20.538	20,355	20,401	20'474	20'542	20.602	20.663	20'717	2
1	19.987	20.081	20,168	20.240	20.324	20.394	20'459	20.210	20.575	20.626	1
50	19.917	20.004	20'091	20.160	20°241	20.308	20.370	20.427	20.480	20.23	50
	19	18	17	16	15	14	13	12	II	IO	
	-7		-/		-5	-4	-3				

$\mathbf{0}^{\mathbf{M}(5)}$

4 PER CENT.

CONSTANTS.

Constant.	Number.	Logarithm.
i $(1+i)$ $(1+i)^{\frac{1}{2}}$ $(1+i)^{\frac{1}{4}}$ v $v^{\frac{1}{2}}$ $v^{\frac{1}{4}}$ d	'04 1'04 1'019 803 9 1'009 853 4 '961 538 5 '980 580 7 '990 242 7 '038 461 5	2.602 060 0 0.017 033 3 0.008 516 7 0.004 258 3 7.982 966 7 7.991 483 3 7.995 741 7 2.585 026 7 2.593 515 5

 $O^{M(5)}$

COMMUTATION TABLE

4 PER CENT

x	D_x	\mathbb{N}_x	\mathbb{S}_x	C_x	M_x	R_x	x
10	72 504	1 502 205	27 249 932	427.43	14 727'31	454 134'00	10
11	69 288	1 429 701	25 747 727	410.99	14 299'88	439 406'69	11
12	66 212	1 360 413	24 318 026	393.98	13 888'89	425 106'81	12
13	63 272	1 294 201	22 957 613	378.25	13 494'91	411 217'92	13
14	60 460	1 230 929	21 663 412	363.14	13 116'66	397 723'01	14
15	57 771	1 170 469	20 432 483	349°18	12 753 52	384 606.35	15
16	55 200	1 112 698	19 262 014	335°75	12 404 34	371 852.83	16
17	52 741	1 057 498	18 149 316	323°33	12 068 59	359 448.49	17
18	50 390	1 004 757	17 091 818	310°89	11 745 26	347 379.90	18
19	48 141	954 367	16 087 061	298°93	11 434 37	335 634.64	19
20	45 990	906 226	15 132 694	288°32	11 135'44	324 200'27	20
21	43 933	860 236	14 226 468	278°49	10 847'12	313 064'83	21
22	41 965	816 303	13 366 232	268°19	10 568'63	302 217'71	22
23	40 083	774 338	12 549 929	259°04	10 300'44	291 649'08	23
24	38 282	734 255	11 775 591	250°20	10 041'40	281 348'64	24
25	36 559	695 973	11 041 336	242'38	9 791°20	271 307.24	25
26	34 911	659 414	10 345 363	234'45	9 548°82	261 516.04	26
27	33 334	624 503	9 685 949	227'10	9 314°37	251 967.22	27
28	31 824	591 169	9 061 446	220'61	9 087°27	242 652.85	28
29	30 380	559 345	8 470 277	213'97	8 866°66	233 565.58	29
30	28 997	528 965	7 910 932	208'41	8 652°69	224 698 92	30
31	27 674	499 968	7 381 967	202'68	8 444°28	216 046 23	31
32	26 407	472 294	6 881 999	197'35	8 241°60	207 601 95	32
33	25 194	445 887	6 409 705	192'92	8 044°25	199 360 35	33
34	24 032	420 693	5 963 818	188'54	7 851°33	191 316 10	34
35	22 919	396 661	5 543 125	184°46	7 662.79	183 464'77	35
36	21 853	373 742	5 146 464	180°64	7 478.33	175 801'98	36
37.	20 832	351 889	4 772 722	177°53	7 297.69	168 323'65	37
38	19 853	331 057	4 420 833	174°60	7 120.16	161 025'96	38
39	18 915	311 204	4 089 776	171°84	6 945.56	153 905'80	39
40 41 42 43 44	18 016 17 153 16 326 15 532 14 771	292 289 274 273 257 120 240 794 225 262	3 778 572 3 486 283 3 212 010 2 954 890 2 714 096	169°44 167°35 165°73 164°16	6 773'72 6 604'28 6 436'93 6 271'20 6 107'04	146 960'24 140 186'52 133 582'24 127 145'31 120 874'11	40 41 42 43 44
45	14 040	210 491	2 488 834	161°98	5 944°23	114 767°07	45
46	13 338	196 451	2 278 343	161°13	5 782°25	108 822°84	46
47	12 664	183 113	2 081 892	160°72	5 621°12	103 040°59	47
48	12 016	170 449	1 898 779	160°39	5 460°40	97 419°47	48
49	11 394	158 433	1 728 330	160°27	5 300°01	91 959°07	49
50	10 795	147 039	1 569 897	160°33	5 139'74	86 659.06	50
51	10 220	136 244	1 422 858	160°54	4 979'41	81 519.32	51
52	9 665 9	126 024'4	1 286 614'0	160°87	4 818'87	76 539.91	52
53	9 133 3	116 358'5	1 160 589'6	161°54	4 658'00	71 721.04	53
54	8 620 5	107 225'2	1 044 231'1	162°15	4 496'46	67 063.04	54

 $O^{M(5)}$

COMMUTATION TABLE

PER

	1			}			
x	D_x	\mathbb{N}_x	S_x	C_x	\mathbf{M}_x	R_x	x
55	8 126.8	98 604.7	937 005'9	162.81		62 566.58	55
56 57	7 651 . 4	90 477'9 82 826'5	838 401°2 747 923°3	163.20	4 171°50 4 008°00	58 232°27 54 060°77	56 57
58	6 752.6	75 632 9	665 096.8	165.00	3 843.70	50 052.77	58
59	6 327.9	68 880.3	589 463.9	165.60	3 678.70	46 209 07	59
60	5 918.9	62 552 4	520 583.6	166.56	3 513.10	42 530 37	60
61	.5 5250	56 633.2	458 031.5	166.72	3 346.84	39 017:27	61
62	5 145.8	51 108.5	401 397'7	166,01	3 180.15	35 670.43	62 63
63	4 781 °0 4 430°1	45 962.7	350 289°2 304 326°5	166.66	3 013 · 21 2 846 · 22	32 490'31 29 477'10	64
65	4 093'I	36 751.6	263 144.8	166.11	2 679.56	26 630.88	65
66	3 769.5	32 658.5	226 393.5	165.06	2 513.45	23 951'32	66
67	3 459.5	28 889.0	193 734'7	163.28	2 348 39	21 437.87	67
68 69	3 162'9	25 429°5	164 845.7	161.69	2 184.81	19 089 48	68 69
70	2 879°5 2 609°6	19 387'1	139 416·2	159°14 156°04	1 863.08	16 904.67 14 881.55	70
71	2 353°2	16 777.5	97 762.5	150 04	1 707'94	13 017 57	71
72	2 110'4	14 424.3	80 985.0	147 92	1 555.64	11 309'63	72
73	1 881.3	12 313.9	66 560.7	142.84	1 407.72	9 753 99	73
74	1 999.1	10 432.6	54 246.8	137.03	1 264 88	8 346.27	74
75	1 465'0	8 766.5	43 814.2	130.24	1 127.85	7 081.39	75 76
76 77	1 278°1 1 105'6	7 301°5 6 023°4	35 047:7 27 746:2	123.42	997 . 31	5 953°54 4 956°23	77
78	947.31	4 917.82	21 722 77	107.43	758.17	4 082 34	78
79	803.45	3 970.21	16 804.95	98.743	650.735	3 324 172	79
80	673.80	3 167.06	1283444	89.730	551.992	2 673 437	80
81	558.16	2 493 26	9 667 38	80.203	462'262	2 121°445.	81 82
82	456°18 367°40	1 935'10 1 478'92	7 174 12 5 239 02	71°236 62°081	381.759 310.23	1 659°183 1 277°424	83
84	291:19	1 111,25	3 760:10	53'239	248.442	966.901	84
85	226.76	820.33	2 648°58	44.848	195.503	718.459	85
86	173°18	593°57	1 828.22	36.990	150.355	523°256	86
87 88	129°53	420'39	1 234.68	29.894	113,362	372,001	87 88
89	94.658 67.455	290.855 196.194	814°289 523°434	23.262 18.084	83°471 59°909	259 . 536	89
90	46.777	128.742	327.237	13.27	41.825	116.126	90
91	31.451	81.965	198.495	9'755 3	28.298 4	74°330 6	91
92	20°486	50.214	116.230	6.852 7	18.243 1	46.032 2	92
93	7.766 5	30°028 17°182 9	35'988 2	4.584 8 2.987 1	11°690 4 7°105 6	27°489′1 15°798 7	93 94
95	4.480 7	9°416 4	18.805 3	1.829 9		8.693 1	
96	2.478 5	4'935 7	9,388 9	1,001 3		4°574 6	
97	1,5018	2°457 2	4°453 2	*599 6	1,164 3	2.586 0	97
98	642 5	1°165 4	1,000 0	308 9		1.088 4	
99	308 9	522 9	*830 6	1584		°491 0	_
100	138 6 057 1	°214 0	°3°7 7	°076 2 °036 6	°130 4 °054 2	·202 2 ·071 8	
102	.018 3	0183	*0183	0176			102
<u> </u>		1		1		1	

 $\mathbf{O^{M(5)}}$ logarithms and co-logarithms of D_x , N_x , C_x , M_x 4 per cent.

.≀	log D _x	$\log N_x$	$\log \mathrm{C}_x$	$\log M_x$	$\operatorname{col} \operatorname{D}_x$	$\operatorname{col} \mathbb{N}_x$	col C _x	$\operatorname{col} \mathrm{M}_x$	x
10 11 12 13 14	4.860 36 .840 66 .820 94 .801 21 .781 47	6'176 73 '155 25 '133 67 '112 00 '090 23	2.630 86 .613 83 .595 47 .577 77 .560 08	4.168 12 .155 33 .142 67 .130 17 .117 82	5.139 64 159 34 179 06 198 79 218 53	7·823 27 ·844 75 ·866 33 ·888 oo ·909 77	3·369 14 ·386 17 ·404 53 ·422 23 ·439 92	5·831 88 ·844 67 ·857 33 ·869 83 ·882 18	10 11 12 13 14
15 16 17 18 19	761 71 741 94 722 15 702 34 682 51	.068 36 .046 38 .024 28 .002 06 5.979 72	°543 °4 °526 °01 °509 64 °492 61 °475 57	'105 63 '093 57 '081 66 '069 86 '058 21	·238 29 ·258 06 ·277 85 ·297 66 ·317 49	931 64 953 62 975 72 975 74 6020 28	'456 96 '473 99 '490 36 '507 39 '524 43	·894 37 ·906 43 ·918 34 ·930 14 ·941 79	15 16 17 18 19
20 21 22 23 24	662 66 642 79 622 88 602 96 582 99	'957 24 '934 62 '911 85 '888 93 '865 85	'459 87 '444 81 '428 43 '413 37 '398 29	°046 71 °035 31 °024 02 °012 86 °001 79	'337 34 '357 21 '377 12 '397 04 '417 01	°042 76 °065 38 °088 15 °111 07 °134 15	'540 13 '555 19 '571 57 '586 63 '601 71	953 29 964 69 975 98 987 14 998 21	20 21 22 23 24
25 26 27 28 29	563 00 542 96 522 88 502 76 482 58	*842 59 *819 16 *795 53 *771 71 *747 68	'384 50 '370 05 '356 21 '343 62 '330 36	3.990 84 .979 95 .969 15 .958 43 .947 76	'437 00 '457 04 '477 12 '497 24 '517 42	157 41 180 84 204 47 228 29 252 32	615 50 629 95 643 79 656 38 669 64	4°009 16 °020 05 °030 85 °041 57 °052 24	25 26 27 28 29
30 31 32 33 34 35	'462 36 '442 07 '421 71 '401 29 '380 79 '360 19	'723 43 '698 94 '674 21 '649 23 '623 97 '598 42	'318 92 '306 80 '295 23 '285 38 '275 41 '265 90	937 15 926 56 916 01 905 49 894 94	537 64 557 93 578 29 598 71 619 21	'276 57 '301 06 '325 79 '350 77 '376 03 '401 58	'681 08 '693 20 '704 77 '714 62 '724 59	°062 85 °073 44 °083 99 °094 51 °105 06	30 31 32 33 34 35
36 37 38 39 40	339 51 318 73 297 83 276 80	596 42 572 57 546 41 519 90 493 05 465 81	205 90 256 82 249 26 242 03 235 12	873 80 863 19 852 49 841 71	660 49 681 27 702 17 723 20	'427 43 '453 59 '480 10 '506 95	'734 10 '743 18 '750 74 '757 97 '764 88	115 61 126 20 136 81 147 51 158 29	36 37 38 39
41 42 43 44 45	'234 35 '212 88 '191 24 '169 41	'438 18 '410 14 '381 65 '352 69	°223 62 °219 39 °215 26 °211 68	*819 83 *808 68 *797 35 *785 83	'765 65 '787 12 '808 76 '830 59	534 19 561 82 589 86 618 35 647 31	776 38 780 61 784 74 788 32	*180 17 *191 32 *202 65 *214 17	41 42 43 44
46 47 48 49	'147 37 '125 09 '102 57 '079 76 '056 66	'323 23 '293 25 '262 72 '231 59 '199 85	'209 46 '207 18 '206 06 '205 18 '204 86	737 22	*852 63 *874 91 *897 43 *920 24 *943 34	'676 77 '706 75 '737 28 '768 41 '800 15	'790 54 '792 82 '793 94 '794 82 '795 14	225 90 237 90 250 18 262 78 275 72	45 46 47 48 49
50 51 52 53 54	'033 22 '009 43 3'985 24 '960 63 '935 53	°167 43 °134 32 °100 45 °065 80 °030 30	'205 02 '205 58 '206 47 '208 28 '209 91	697 18 697 18 682 95 668 20 652 87	'966 78 '990 57 4'014 76 '039 37 '064 47	'832 57 '865 68 '899 55 '934 20 '969 70	'794 98 '794 42 '793 53 '791 72 '790 09	289 06 302 82 317 05 331 80 347 13	50 51 52 53 54

 $\mathbf{O^{M(5)}}$ logarithms and co-logarithms of D_x , N_x , C_x , M_x 4 cent.

						1			
x	$\log D_x$	$\log N_x$	$\log \mathrm{C}_x$	$\log M_x$	$\operatorname{col} \mathrm{D}_x$	col N _x	$\operatorname{col} \mathbf{C}_x$	$\operatorname{col} \mathrm{M}_x$	x
55	3.909 92	4.093 00	2°211 67	3.636 92	4.000 08	5.000 10	3.788 33	4 .363 08	55
56	·883 74	956 54	'213 51	620 29	116 26	.043 46	.786 49	379 71	56
57	856 95	938 17	215 64	602-93	143 05	'081 83	.784 36	397 07	57
58	*829 47	.878 71	217 49	.584 75	170 53	121 29	'782 51	415 25	58
59	.801 26	.838 09	'219 05	565 69	19874	16191	780 95	434 31	59
60	.772 24	796 24	.220 80	545 69	.227 76	.203 76	.779 20	454 31	60
61	742 33	790 24	222 00	545 64	257 67	246 93	778 00	454 34	61
62	711 45	708 49	222 47	502 44	288 55	291 51	777 53	497 56	62
63	679 52	'662 41	222 68	479 03	'320 48	337 59	777 32	520 97	63
64	.646 41	61470	*221 82	454 27	353 59	385 30	.778 18	545 73	64
65	_	.565 28	'220 39	.428 06	387 95	434 72	.779 61	571 94	65
66	.612 05 .576 29	505 20	220 39	420 00	423 71	°486 00	782 35	571 94	66
67	570 29	460 73	217 05	370 77	·460 99	539 27	786 28	629 23	67
68	500 08	405 73	208 69	370 77	499 92	594 66	791 31	660 59	68
69	459 32	347 65	201 77	306 02	'540 68	652 35	798 23	693 98	69
70	439 32	287 51			583 42	71249	806 76	729 56	70
71	371 66		193 24	'270 44 '232 47	628 34	775 27	817 31	767 53	71
72	371 00	159 09	102 09	19191	675 63	*840 91	829 97	808 09	72
73	274 46	*090 40	17003	191 91	725 54	'909 60	845 16	851 48	73
74	274 40	'018 39	134 80	102 05	778 29	.081 61	863 20	897 95	74
	· .	1			834 16	_	.884 26		75
75 76	165 84	3.942 83	115 74	052 25	893 43	4.057 17	908 62	3.001 17	76
77	'106 57 '043 58	·863 41 ·779 84	063 39	941 46	956 42	220 16	936 61	058 54	77
78	2.076 49	691 77	'031 13	879 77	3.023 21	308 23	9368 87	120 23	78
79	904 96	.598 85	1.994 21	813 40	095 04	401 15	2.002 49	186 60	79
	828 53	.200 66		741 93	171 47	499 34	.047 06	.258 07	80
80	746 76	396 77	952 94	664 89	253 24	603 23	04/00	335 11	81
82	659 14	286 70	852 70	581 79	340 86	71330	147 30	'418 21	82
83	565 14	169 94	792 96	'492 09	434 86	.830 06	207 04	507 91	83
84	464 18	'045 92	726 23	395 22	535 82	954 08	273 77	604 78	84
85	355 56		651 74	290 49	644 44	3.086 01	*348 26	709 51	85
86	238 51	2.913 99	568 09	177 12	'761 49	226 53	431 91	822 88	86
87	112 38	623 65	475 58	.054 48	.887 62	376 35	524 42	945 52	87
88	1.076 16	463 68	372 21	1'921 54	2.023 84	536 32	627 79	2.078 46	88
89	829 01	292 69	257 28	777 49	170 99	'707 31	742 72	222 51	89
90	.670 03	109 72	131 21	621 44	'329 97	890 28	.868 79	'378 56	90
91	497 63	1,013 63	0.989 24	451 76	502 37	2.086 37	1.010 46		91
92	'311 45	703 41	835 86	268 18	688 55	296 59	164 14	731 82	92
93	108 75	477 53	661 32	'067 83	891 25	522 47	338 68		93
94	0.890 53	235 10	475 25	0.821 60	1.100 22	764 90	524 75	1.148 40	94
95	651 35	0.973 88	'262 43	614 74	'348 65	1.026 13	737 57	385 26	95
96	394 18	693 35	'037 96	359 57	605 82	306 65	962 04		96
97	111.19	'390 44	1.777 89	078 20	.888 81	609 56	0'222 11	921 80	97
98	ī.807 85	066 48	489 79		0.105 12	933 52	510 21	0.553 25	98
99	489 79	1.718 42	199 75		.210 21	0°281 58	800 24	539 40	99
100	141 76	'330 41	2.881 69		858 24	.669 59	1,118 31	884 72	100
101	2.756 75	2.877 37	563 63		1.243 25	1.155 63	436 37		101
102	262 60	262 60	245 57	245 57	737 40	737 40	754 43		102
_		1	1 .0.07				1	1	

 $O^{M(5)}$

VALUES OF a_x , A_x , P_x , AND OF \overline{a}_x , \overline{A}_x , \overline{P}_x

4 PER

x	$(\ell_x$	Λ_x	P_x	\bar{a}_x	$\overline{\mathbf{A}}_x$	$ar{\mathrm{P}}_x$	x
10 11 12 13 14	19.719 19.634 19.546 19.455 19.359	'20 312 '20 638 '20 976 '21 328 '21 695	.00 980 .01 000 .01 021 .01 043	20°215 20°130 20°042 19°855	'20 715 '21 049 '21 394 '21 751 '22 127	'01 025 '01 046 '01 067 '01 090 '01 114	10 11 12 13 14
15 16 17 18 19	19.261 19.051 18.940 18.825	'22 076 '22 471 '22 883 '23 309 '23 751	°01 090 °01 115 °01 169 °01 168	19.757 19.654 19.547 19.436	'22 512 '22 916 '23 335 '23 771 '24 222	°01 139 °01 166 °01 194 °01 223 °01 254	15 16 17 18 19
20	18.705	'24 213	'01 229	19'201	'24 692	'01 286	20
21	18.581	'24 690	'01 261	19'077	'25 179	'01 320	21
22	18.452	'25 185	'01 295	18'948	'25 685	'01 356	22
23	18.319	'25 698	'01 330	18'815	'26 206	'01 393	23
24	18.180	'26 230	'01 368	18'676	'26 751	'01 432	24
25	18.037	26 782	'01 407	18.533	27 312	°01 474 °01 517 °01 563 °01 611 °01 662	25
26	17.888	27 352	'01 448	18.384	27 897		26
27	17.735	27 943	'01 491	18.231	28 497		27
28	17.576	28 554	'01 537	18.072	29 120		28
29	17.412	29 186	'01 585	17.908	29 764		29
30	17:242	·29 839	°01 636	17.738	'30 430	'01 716	30
31	17:066	·30 513	°01 689	17.562	'31 121	'01 772	31
32	16:886	·31 210	°01 745	17.382	'31 827	'01 831	32
33	16:699	·31 930	°01 804	17.195	'32 560	'01 894	33
34	16:506	·32 670	°01 866	17.002	'33 317	'01 960	34
35	16·307	'33 435	'01 932	16.803	'34 °97	'02 029	35
36	16·103	'34 221	'02 001	16.599	'34 898	'02 102	36
37	15·892	'35 032	'02 074	16.388	'35 725	'02 180	37
38	15·675	'35 864	'02 151	16.171	'36 576	'02 262	38
39	15·453	'36 721	'02 232	15.949	'37 447	'02 348	39
40 41 42 43 44	15'224 14'990 14'749 14'503 14'250	'37 599 '38 502 '39 428 '40 375 '41 345	°02 317 °02 408 °02 503 °02 604 °02 711	15'720 15'486 15'245 14'999	'38 345 '39 263 '40 208 '41 173 '42 165	°02 439 °02 535 °02 637 °02 745 °02 859	40 41 42 43 44
45 46 47 48 49	13'992 13'729 13'459 13'185 12'905	'42 338 '43 352 '44 386 '45 442 '46 518	°02 824 °02 943 °03 070 °03 204 °03 345	14'488 14'225 13'955 13'681	'43 177 '44 209 '45 267 '46 342 '47 440	°02 980 °03 108 °03 244 °03 387 °03 540	45 46 47 48 49
50	12.621	'47 612	°03 495	13'116	'48 558	'03 702	50
51	12.332	'48 725	°03 655	12'827	'49 692	'03 874	51
52	12.038	'49 855	°03 824	12'533	'50 845	'04 057	52
53	11.740	'51 000	°04 003	12'235	'52 013	'04 251	53
54	11.439	'52 160	°04 193	11'934	'53 194	'04 457	54

OM(5)

VALUES OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x

-							
x	α_x	A_x	P_x	\overline{a}_x	$\overline{\mathrm{A}}_x$	$\overline{\mathrm{P}}_x$	x
55 56 57 58 59	11'133 10'825 10'514 10'200 9'885	53 333 54 519 55 716 56 922 58 134	'04 396 '04 611 '04 839 '05 082 '05 341	11.628 11.320 11.009 10.695	54 394 55 602 56 822 58 053 59 289	'04 678 '04 912 '05 161 '05 428 '05 712	55 56 57 58 59
60	9.568	59 354	'05 616	10.063	60 532	°06 015	60
61	9.250	60 577	'05 910	9.745	61 781	°06 340	61
62	8.932	61 800	'06 222	9.426	63 030	°06 687	62
63	8.614	63 025	'06 556	9.107	64 281	°07 058	63
64	8.296	64 248	'06 911	8.790	65 527	°07 455	64
65	7.979	.65 465	°07 291	8:472	66 771	07 881	65
66	7.664	.66 678	°07 696	8:157	68 009	08 338	66
67	7.351	.67 883	°08 129	7:843	69 238	08 828	67
68	7.040	.69 076	°08 592	7:532	70 457	09 354	68
69	6.733	.70 259	°09 086	7:225	71 664	09 919	69
70	6.429	71 427	'10 180 '10 785 '11 432 '12 124	6.921	72 857	'10 527	70
71	6.130	72 579		6.621	74 933	'11 182	71
72	5.835	73 712		6.326	75 191	'11 887	72
73	5.545	74 827		6.036	76 328	'12 646	73
74	5.262	75 917		5.751	77 443	'13 466	74
75	4.984	76 986	12 865	5.473	78 535	14 350	75
76	4.713	78 030	13 659	5.201	79 601	15 305	76
77	4.448	79 046	14 508	4.936	80 641	16 338	77
78	4.191	80 035	15 417	4.678	81 652	17 454	78
79	3.942	80 992	16 389	4.428	82 635	18 664	79
80	3.700	·81 922	'17 429	4.185	.83 586	19 972	80
81	3.467	·82 819	'18 540	3.951	.84 505	21 390	81
82	3.242	·83 685	'19 728	3.724	.85 392	22 927	82
83	3.025	·84 518	'20 997	3.507	.86 246	24 595	83
84	2.817	·85 318	'22 351	3.297	.87 069	26 408	84
85	2.618	.86 086	23 796	3.096	·87 857	.28 378	85
86	2.427	.86 818	25 331	2.904	·88 610	.30 512	86
87	2.245	.87 519	26 967	2.720	·89 331	.32 839	87
88	2.073	.88 182	28 699	2.546	·90 016	.35 361	88
89	1.909	.88 814	30 535	2.379	·90 668	.38 107	89
90 91 92 93 94	1'752 1'606 1'466 1'338 1'212	.89 415 .89 977 .90 517 .91 008	'32 488 '34 525 '36 709 '38 931 '41 352	2.221 2.072 1.929 1.797 1.669	'91 291 '91 875 '92 436 '92 951 '93 456'	'41 111 '44 347 '47 932 '51 717 '56 008	90 91 92 93 94
95 96 97 98 99	1°102 '991 '902 '814 '693	'91 916 '92 340 '92 685 '93 031 '93 500	'43 738 '46 368 '48 726 '51 286 '55 231	1.554 1.440 1.346 1.253 1.126	'93 9°5 '94 353 '94 721 '95 087 '95 583	.60 432 .65 537 .70 378 .75 906 .84 872	95 96 97 98 99
100	*544	'94 085	.60 935	.972	.96 190	.99 006	100
101	*321	'94 896	.71 884	.742	.97 091	1.30 922	101
102	*000	'96 154	.96 154	.414	.98 376	2.37 612	102

OM(5) LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x 4 per cent.

x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \overline{a}_x$	$\log \widetilde{\mathbf{A}}_x$	$\log \overline{\mathrm{P}}_x$	x
10	1°316 37	7·307 76 ·314 67 ·321 73 ·328 96 ·336 35	3'991 39	1°305 67	7'316 28	2.010 64	10
11	°314 59		2'000 08	°303 84	'323 23	.019 37	11
12	°312 73		'009 00	°301 94	'330 29	.028 37	12
13	°310 79		'018 17	°299 96	'337 48	.037 51	13
14	°308 76		'027 59	°297 87	'344 92	.047 04	14
15 16 17 18 19	306 65 304 44 302 13 299 72	'343 92 '351 63 '359 51 '367 52 '375 72	°037 27 °047 19 °057 38 °067 80 °078 51	'295 72 '293 45 '291 08 '288 61 '286 03	'352 41 '360 14 '368 01 '376 05 '384 21	'056 68 '066 70 '076 93 '087 43 '098 16	15 16 17 18 19
20	*294 58	'384 05	*089 47	'283 32	'392 56	'109 24	20
21	*291 83	'392 52	*100 69	'280 51	'401 04	'120 51	21
22	*288 97	'401 14	*112 17	'277 56	'409 68	'132 10	22
23	*285 97	'409 90	*123 93	'274 50	'418 40	'143 89	23
24	*282 86	'418 80	*135 94	'271 28	'427 34	'156 06	24
25	'279 59	'427 84	'148 25	267 95	'436 35	'168 41	25
26	'276 20	'436 99	'160 79	264 44	'445 56	'181 10	26
27	'272 65	'446 27	'173 62	260 81	'454 80	'193 99	27
28	'268 95	'455 67	'186 72	257 01	'464 19	'207 20	28
29	'265 10	'465 18	'200 08	253 05	'473 69	'220 63	29
30	*261 07	'474 79	'213 72	*248 90	'483 30	'234 39	30
31	*256 87	'484 49	'227 62	*244 57	'493 05	'248 46	31
32	*252 50	'494 30	'241 80	*240 10	'502 80	'262 69	32
33	*247 94	'504 20	'256 26	*235 40	'512 68	'277 29	33
34	*243 18	'514 15	'270 97	*230 50	'522 67	'292 17	34
35	.238 23	'524 20	'285 97	'225 39	532 72	307 32	35
36	.233 06	'534 29	'301 23	'220 08	542 80	322 72	36
37	.227 68	'544 46	'316 78	'214 53	552 97	338 46	37
38	.222 07	'554 66	'332 59	'208 74	563 20	354 45	38
39	.216 25	'564 91	'348 66	'202 73	573 42	370 68	39
40	*210 16	'575 18	365 02	'196 45	.583 71	387 27	40
41	*203 83	'585 48	381 65	'189 94	.593 98	404 05	41
42	*197 26	'595 80	398 54	'183 13	.604 31	421 19	42
43	*190 41	'606 11	415 70	'176 06	.614 61	438 54	43
44	*183 28	'616 42	433 14	'168 67	.624 95	456 27	44
45	175 86	'626 73	'450 87	'161 01	.635 25	'474 25	45
46	168 16	'637 01	'468 85	'153 05	.645 51	'492 45	46
47	160 15	'647 25	'487 10	'144 73	.655 78	'511 05	47
48	151 83	'657 46	'505 63	'136 12	.665 97	'529 85	48
49	143 19	'667 62	'524 43	'127 14	.676 14	'549 02	49
50	134 21	.677 72	543 51	°117 80	.686 26	568 46	50
51	124 89	.687 75	562 86	°108 13	.696 29	588 16	51
52	115 21	.697 71	582 50	°098 06	.706 25	608 19	52
53	105 17	.707 57	602 40	°087 60	.716 11	628 51	53
54	1094 77	.717 34	622 57	°076 79	.725 86	649 07	54

OM(5) LOGARITHMS OF a_x , A_x , P_x , and of \overline{a}_x , \overline{A}_x , \overline{P}_x 4 Per cent

•			or α_x , α_x ,	,			L' CENT
x	$\log a_x$	$\log A_x$	$\log P_x$	$\log \overline{a}_x$	$\log \overline{\mathrm{A}}_x$	$\log \overline{\overline{\mathrm{P}}}_x$	$\frac{1}{x}$
55	1°083 98	7.727 00	2.643 02	1°065 51	ī'735 55	2.670 05	55
56	°072 80	.736 55	.663 75	°053 85	'745 °9	.691 25	56
57	°061 22	.745 98	.684 76	°041 75	'754 52	.712 77	57
58	°049 24	.755 28	.706 04	°029 18	'763 82	.734 65	58
59	°036 83	.764 43	.727 60	°016 20	'772 97	.756 77	59
60	°024 00	7773 45	749 45	'002 73	781 99	'779 26	60
61	°010 74	782 31	771 57	0'988 76	790 85	'802 09	61
62	0°997 04	790 99	793 95	'974 34	799 55	'825 21	62
63	°982 89	799 51	816 62	'959 39	808 08	'848 69	63
64	°968 29	807 86	839 57	'943 96	816 42	'872 45	64
65	'953 23	'816 01	.862 78	'928 00	·824 59	*896 59	65
66	'937 71	'823 98	.886 27	'911 51	·832 57	*921 05	66
67	'921 72	'831 76	.910 04	'894 50	·840 34	*945 84	67
68	'905 26	'839 33	.934 07	'876 93	·847 92	*970 99	68
69	'888 33	'846 70	.958 37	'858 82	·855 30	*996 48	69
70	.870 93	*853 86	-982 93	'840 15	*862 47	7.022 30	70
71	.853 07	*860 81	1.007 74	'820 91	*869 43	.048 52	71
72	.834 72	*867 54	.032 82	'801 10	*876 17	.075 07	72
73	.815 94	*874 06	.058 12	'780 72	*882 68	.101 95	73
74	.796 68	*880 34	.083 66	'759 76	*888 98	.129 24	74
75	776 99	*886 41	109 42	'738 22	*895 06	156 85	75
76	756 84	*892 26	135 42	'716 09	*900 92	184 83	76
77	736 26	*897 88	161 62	'693 36	*906 56	213 20	77
78	715 28	*903 28	188 00	'670 07	*911 97	241 90	78
79	693 89	*908 44	214 55	'646 17	*917 16	271 00	79
80	*672 13	'913 40	241 27	.621 71	'922 13	'300 42	80
81	*650 01	'918 13	268 12	.596 67	'926 88	'330 21	81
82	*627 56	'922 65	295 09	.571 07	'931 42	'360 35	82
83	*604 80	'926 95	322 15	.544 90	'935 74	'390 85	83
84	*581 74	'931 04	349 30	.518 13	'939 86	'421 74	84
85	'558 43	'934 93	'376 50	490 80	'943 78	'452 98	85
86	'534 96	'938 61	'403 65	463 01	'947 48	'484 47	86
87	'511 27	'942 10	'430 83	434 62	'951 00	'516 39	87
88	'487 52	'945 38	'457 86	405 79	'954 32	'548 52	88
89	'463 68	'948 48	'484 80	376 45	'957 45	'581 00	89
90	°439 69	*951 41	°511 72	346 47	'960 43	°613 96	90
91	°416 00	*954 13	°538 13	316 33	'963 20	°646 86	91
92	°391 96	*956 73	°564 77	285 22	'965 84	°680 63	92
93	°368 78	*959 08	°590 30	254 62	'968 25	°713 63	93
94	°344 87	*961 37	°616 50	222 35	'970 61	°748 25	94
95 96 97 98 99	'322 53 '299 17 '279 25 '258 63 '228 63	°963 39 °965 39 °967 01 °968 63 °970 81	.640 86 .666 22 .687 76 .710 00 .742 18	191 42 158 27 129 05 097 85	'972 69 '974 76 '976 45 '978 12 '980 38	°781 27 °816 49 °847 44 °880 28 °928 76	95 96 97 98 99
100	188 65	°973 52	.784 87	1°987 47	*983 13	°375 86	100
101	120 62	°977 25	.856 63	*870 17	*987 18		101
102	000 00	°982 97.	.982 97	*617 02	*992 89		102

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

4 PER

										T , (
Dura-	IO	II	12	13	14	15	16	17	18	19	Dura-
tion.	19.719	19.634	19.546	19.455	19.359	19.261	19.158	19.051	18-940	18.825	tion.
0	.000	.000	.000	.000	.000	.000	.000	000	.000	.000	0
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	1.860	1.869	1.869	1.869	1.869	°955 1.868	1.868	°955	°955	°955 1.868	1 2
3	2.243	2.241	2.741	2.241	2.241	2.741	2.740	2.740	2.740	2.740	3
4	3.575	3.575	3.575	3.575	3.574	3.574	3.574	3.573	3.573	3.24	4
5	4.372	4.372	4.371	4'371	4.371	4.370	4.369	4.369	4.368	4.364	5
8	5.861	5.860	5.860	2.829	5.858	5.857	5.856	5.855	5.853	5.852	6 7
8	6.226	6.222	6.224	6.223	6.225	6.221	6.249	6.248	6.246	6.244	8
9	7.550	7.519	7.218	7.216	7.512	7.213	7.212	7.210	7.208	7.206	9
10	7.854	7.853	7.851	7.850	7.848	7.846	7.844	7.842	7.839	7.837	10
1 2	8.460	8.459	8.457	8.455	8.453	8·451 9·028	8.448	8.445	8.442	8.439	1 2
3	9.292	9.590	9.035	9.033	9.285	9.578	9.025	9.021	9.267	9.262	3
4	10,150	10.112	10.114	10,111	10.108	10.104	10,100	10.096	10.001	10.086	4
15	10.624	10.651	10.918	10.614	10.910	10.606	10.605	10.296	10.201	10.282	15
6	11,100	11'102	11,099	11.094	11,000	11.082	11.080	11.074	11.068	11,001	6
7 8	11.262	11,2000	11.557	11.223	11.548	11.242	11.236	11.230	11.223	11.212	8
9	12.423	12.418	12'413	12.407	12.401	12.394	12.387	12.379	12.370	12.360	9
20	12.823	12.818	12.813	12.806	12.799	12.791	12.783	12.774	12.764	12.753	20
1	13.205	13.199	13.193	13.182		13.169	13.160	13.120	13.139	13'127	1
3	13.269	13.263	13.250	13.893	13.539	13.530	13.865	13.820	13.497	13.483	3
4	14.548	14'240	14.535	14'222	14.515	14'201	14.189	14.176	14.161	14.142	4
25	14.264	14.556	14.246	14.536	14.525	14.213	14.200	14.485	14.469	14.452	25
6	14.866	14.856	14.846		14.823	14.810	14.795	14.780	14.762	14'744	6
8	15.153	15.416	15.132		15'377	12,361	15.077	15.060	15.309	15'021	8
9	15.688	15.676	15.663	15.649		15.617	15.299	15.579	15.557	15.233	9
30	15.936	15'923	15.910	15:894		15.860	15.840	15.819	15.795	15.770	30
1	16.173	16.120	16'144			16.001	16.070	16.047	16.032	15.994	1 2
3	16.913	16.383	16.367	16.320		16.310	16.494	16.468	16.439	16.407	3
4	16.816	16.799	16.781	16.761	16.739	16.715	16.689	16.661	16.630	16.297	4
35	17.009	16.991	16.972	16.951	16.927	16.902	16.875	16.845	16.812	16.776	35
6	17'193	17.174	17.154	17'131		17.079	17.050	17.181	16.983	16.945	6
8	17.368	17.348	17.326	17.463		17.246	17.215	17.335	17.144	17.253	8
9	17.691	17.668			17.586	17.554		17.480	17.439	17.394	9
40	17.840	17.815	17.789	17.760	17.728	17.694	17.657	17.617	17.573	17.525	40
1	17.981	17.955	17'927	17.896	17.863		17.787	17.745	17.698	17.648	1 2
2 3	18.114	18.087	18.057	18.022	18.108	17.951	17.910	17.865	17.925	17.870	3
4	18.359	18.358	18.295	18.259	18.550	18.148	18.135	18.085	18.027	17.969	4
45	18.471	18.439	18.404	18.366	18.325	18.380	18.535	18.179	18.122	18.061	45
6	18.577	18.543	18.506	18.466	18.423	18.376	18.325	18.270	18.310	18.146	6 7
7 8	18.676	18.640	18.601	18.559	18.214	18.465	18.412	18.354	18.366	18.536	8
9	18.856		18.774	18.728	18.678		18.266	18.203	18.435	18.365	9
	10	II	12	13	14	15	16	17	18	19	

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VALUES OF TEMPORARY ANNUITIES OF 1

4 PER

	20	21	22	23	24	25	26	27	28	29	
Dura- tion.	18.705	18:581	18.452	18:319	18.180	18.037	17:888	17:735	17.576	17.412	Dura- tion.
0	,000	.000	*000	*000	,000	,000	,000	,000	,000	,000	0
1	955	955	955	*955	955	955	955	955	955	'954	1
2	1.868	1.868	1.867	1.864	1.867	1.867	1.866	1.866	1.866	1.862	2
3 4	2°739 3°572	2°739 3°571	2°739 3°570	2.738 3.570	2°738 3°569	2.737 3.568	2°737 3°567	2°736 3°566	2°735 3°565	2°735 3°564	3 4
5	4'367	4.366	4.362	4.364	4.363	4.361	4.360	4,328	4.357	4.355	5
6	5.156	5.154	2.153	5,155	2,150	2,118	2,119	5.114	5.113	2,100	6
7	5.821	5.849	5.847	5.845	5.843	5.841	5.838	5.835	5.832	5.829	7
8 9	6.543	6°540 7°200	6.238	6.535	6.232	6.230	6.226	6.523	6.219	7.168	8 9
10	7.834	7.830	7.827	7.823	7.819	7.814	7.809	7.803	7.797	7'791	10
1	8.435	8.431	8.427	8.422	8.417	8.412	8.406	8.399	8.392	8.384	1
2	0.010	9.002	0.000	8.994	8.988	8.982	8.974	8.966	8.928	8.948	2
3 4	9.557	9.552	9.546	9.539	9.532	9.525	9.216	9.507	9°497	9.486	3 4
15	10.080	10.274	10.263	10.020	10.021	10.042	10.032	10.211	10.408	9°997 10°483	15
6	11.023	10.271	11.036	10.226	10.242	11.004	10,23	10 511	10.498	10 403	6
7	11.206	11.497	11.487	11.476	11.464	11.451	11.436	11'420	11.403	11.384	7
8	11.938	11.058	11.019	11.904	11.890	11.875	11.829	11.841	11.822	11.801	8
9	12.349	12,338	12.322	12.311	12.506	12.279	12.201	12.241	12'220	12'197	9
20	12.741	12.728	12.714	12.698	12.682	13.058	12.643	12.082	12.598	12.572	20
2	13.469	13.453	13.436	13.417	13.397	13.375	13.320	13.324	13.595	13.263	2
3	13.807	13.789	13.771	13.750	13.728	13.403	13.677	13.647	13.616	13.282	3
4	14'128	14.100	14.089	14.066	14'042	14.012	13.986	13.954	13.920	13.882	4
25 6	14.433	14.413	14.390	14.366	14.339	14.310	14.279	14.244	14.478	14'166	25 6
7	14'999	14'974	14.948	14.010	14.888	14.854	14.817	14.777	14.733	14.685	7
8	15.500	15°234	15°205	15.174	15°141	15°104	15.064	15.050	14.974	14.922	8
9	15.208	15.479	15.449	15.415	15'379	15°340	15.297	15.250	15,500	15'144	9
30	15.742	15.712	15.679	15.858	15.604	15.262	15.216	15.466	15.412	15.353	30
2	16.172	15.932	16,105	16.001	16.014	15.968	12,012	15.858	15.797	15.729	2
3	16.373	16.336	16.296	16.252	16.504	16.123	16.097	16.039	15.970	15.899	3
4	16.261	16.21	16.478	16.431	16.381	16.326	16.566	16.505	16.135	16.026	4
35	16.738	16.695	16.620	16.600	16.246	16.630	16.424	16.326	16.421	16.334	35
7	17.060	16.859	19.811	16.902	16.701	16.439	16.209	16.499	16.220	16,461	6
8	17.207	17.124	17.105	17.043	16.980	16.911	16.836	16.755	16.668	16.272	8
9	17.345	17.292	17.234	17.172	17.104	17.032	16.923	16.868	16.777	16.679	9
40	17'473	17.417	17:357	17.291	17.220	17'144	17.061	16.972	16.877	16.773	40
1 2	17.705	17.534	17.471	17.401	17.327	17.247	17.160	17.067	16.967	16.859	1 2
3	17.809	17.744	17.674	17.598	17.516	17.428		17.531	17.153	17.006	3
4	17.906	17.837	17.764	17.684	17.599	17.207	17.408	17.302	17.189	17.068	4
45	17.995	17.923	17.846	17.763	17.674	17.578	17'475	17.365	17.248	17.123	45
6	18.077	18.002	17.921	17.835	17.742	17.642	17.536	17.422	17.301	17'171	6 7
8	18,551	18.139	18.052	17.959	17.859	17.752	17.637	17.216	17.387	17'250	8
9	18.583	18.199	18.108	18.011	17.908	17.797	17.679	17.554	17.422	17.281	9
	20	21	22	23	24	25	26	27	28	29	
-				-5		-5					

 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

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Dura-	30	31	32	33	34	35	36	37	38	39	Dura-
tion.	17:242	17:066	16.886	16.699	16.506	16.307	16.103	15.892	15.675	15.453	tion.
0	.000	*000	.000	.000	.000	.000	0000	.000	.000	.000	0
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	'954 1'865	'954 1'865	°954 1°864	954	°954 1°863	953	°953	1.861	'953 1'860	1.859	1 2
3	2.734	2.733	2.732	2.431	2.730	2.729	2.727	2.726	2.724	2.722	3
4	3.263	3.261	3.260	3.228	3.226	3.554	3.22	3.249	3°547	3.244	4
5	4.353	4.321	4.348	4.346	4°343	4°34° 5°088	4°337 5°084	4°333 5°078	4'329	4°325 5°067	5
6 7	5.825	5.821	5.814	5.097	5.806	5.801	5.794	5.788	5°73 5°78	5.772	7
8	6.210	6.204	6.499	6.493	6.486	6.478	6.470	6.462	6.452	6.441	8
9	7.162	7.122	7.148	7.141	7.132	7.153	7.113	7.102	7.090	7.077	9
10	7.783	7.775	7.767	7.757	7'747	7.736 8.318	7°723 8°303	7.710 8.386	7.695 8.269	7.679 8.250	10
1 2	8·375 8·938	8.365	8.355	8.343	8.331	8.870	8.853	8.833	8.813	8.790	2
3	9'474	9.460	9.446	9.430	9'413	9'394	9.374	9'352	9.328	9.301	3
4	9.983	9.968	9,921	9°933	9,913	9.891	9.868	9.842	9.814	9.784	4
15	10.467	10.420	10.430	10'410	10.384	10'362	10.336	10.306	10.274	10'240	15
6 7	10.027	10.007	10.886	10.862	10.836	10.808	10.778	10.745	10.400	10'669	6
8	11.364	11.341	11.726	11.696	11.664	11.659	11,200	11.249	11.204	11.454	8
9	12.171	12'143	12.113	12.080	12.044	12.002	11.962	11.019	11.866	11.811	9
20	12.244	12.212	12°479	12.442	12°402	12.359	12,315	12.261	12°206	12.146	20
1	12.896	12.865	12.825	12.784	12.741	12.693	12.042	12.585	12.222	12.459	1 2
3	13.229	13,203	13.151	13.107	13.328	13.305	13.540	13.143	13,101	13.053	3
4	13.842	13.797	13.749	13.696	13.639	13.248	13.211	13'438	13.360	13.276	4
25	14.122	14.073	14.021	13.964	13.903	13.836	13.764	13.685	13.601	13.210	25
6	14.386	14.333	14.277	14.215	14.149	14.077	13.999	13.915	13.824	13.726	6 7
8	14.634	14.577	14.216	14.450	14.379	14.302	14.218	14'128	14.031	13.925	8
9	15.082	15.050	14.950	14.874	14.792	14.704	14.608	14.202	14'395	14.276	9
30	15.289	15.550	15.145	15.064	14.976	14.882	14.781	14.671	14.254	14.428	30
1	15.480	15.406	15.326	15.539	15.147	15.047	14'939	14.823	14.699	14.266	1
3	15.657	15.238	15.493	15'402	15.303	12,336	15.084	14.086	14.831	14.802	3
4	15'975	15.886	15.791	15.689	15.24	15.461	15.335	15.199	12.022	14.901	4
35	19.119	16.022	15.922	15.814	15.699	15.575	15.442	15.301	15.120	14.989	35
6	16.546	16.147	16.042	15.929	15.807		15.239	15.391	15.234	15.067	6
7	16.365	16.565	16.121	16.136	15.905	15.770	15.625	15'471	15.308	12,134	8
8 9	16.474	16.366	16.339	16.500	15.993	15.925	15.701	15.603	15'428	15.543	9
40	16.663		16.419		1				15.475	15.285	40
1	16.745	16.621	16.490	16.320	16.505	16.044	15.878	15.401	15.216	15.321	1
2	16.817	16.689	16.553	16.408	16.255	16.093	15.921	15.740	15.220	15.350	3
3 4	16.882		16.657	16.459	16.340	16.190	15.988	15.772	15.248	15.375	4
45	16.990		16.699	16.241	16.374		16.014	15.821	15.620	15.409	45
6	17.034	16.889	16.735	16.572	16.402	16.553	16.035	15.838	15.634	15.421	6
7	17.072		16.765	16.20	16.425		16.02	15.852	15.046	15.431	8
8 9	17.102	1	16.201	16.639	16.444	16.221	16.062	15.863	15.621	15'437	9
	30	31	32	33	34	35	36	37	38	39	
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OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

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Dura-	40	41	42	43	44	45	46	47	48	49	Dura-
tion.	15.224	14.990	14:749	14.503	14.250	13.992	13.729	13.459	13.185	12.905	tion.
0	.000	.000	.000	.000	*000	,000	.000	.000	.000	.000	0
1	'952	952	.921	.021	.021	.950	'949	'949	'948	'947	1
2	1.828	1.857	1.826	1.822	1.823	1.825	1.820	1.849	1.847	1.844	2
3	2.720	2.718	2.716	2.714	2'711	2.408	2.402	2.401	2.697	2.693	3
4	3.240	3.537	3.233	3.259	3.254	3.219	3.214	3.208	3.205	3°494	4
5	4.320	4.312	4.300	4.303	4.296	4.288	4.580	4'271	4.262	4'251	5
6	5.000	5.023	5.045	5.036	5.027	5.016	5.002	4'992	4.979	4.964	6
7	5.763	5.753	5.743	5.431	5.718	5.705	5.690	5.673	5.655	5.636	7
8	6.430	6.418	6.404	6.389	6.373	6.355	6.336	6.312	6.292	6.267	8
9	7.062	7.047	7.030	7.012	6.991	6.969	6.945	6.919	6.891	6.860	9
								7.487		71475	10
10	7.661	7.643	7.622	7.600	7.575	7.548	7.519		7.453	7.415	1
1	8.229	8.306	8.181	8.122	8.122	8.093	8.058	8.020	7:979	7.935	2
2	8.765	8.739	8.709	8.678	8.643	8.605	8.264	8.520	8.472	8.419	_
3	9°272	9.241	9.207	9,140	9,130	9.086	9.039	8.987	8.932	8.871	3
4	9.751	9.712	9.676	9.634	9.284	9.537	9°483	9.424	9°360	9,591	4
15	10'202	10,191	10.119	10.068	10.019	9.959	9.897	9.830	9.758	9.679	15
6	10.626	10.281	10.230	10°476		10.325	10.583	10'207	10'127	10.039	6
7	11'026	10.974	10,018	10.857	10.790	10.419	10.641	10.222	10.467	10.369	7
8	11'401	11.343	11.580	11°213	11.139	11.059	10'973	10.881	10.481	10.673	8
9	11.752	11.688	11.619	11.244	11.462	11.375	11.580	11.178	11.000	10.021	9
	12.080			11.852	11.762	11.666	11.263	11.451	11'332	11'203	20
20		12,010	11.934				11.855	11.401	11.24	11.432	1
1	12.387	12°310	12'227	12'137	12.039	11.032			11.489	11.639	2
2	12.673	12.289	12.498		12.295	12,181	12.022	11.928	11.085	11.824	3
3	12.938	12.847	12.749	12.643	12.229	12.406	12.275	12,132	15,160	11.089	4
4	13.184	13.086	12.080	12.866	12.743	12.011	12.471	12,350			
25	13'411	13.300	13.195	13.069	12.038	12.797	12.647	12.487	12.314	12.139	25
6	13.620	13.207	13.382	13.255	13.114	12.962	12.802	12.636	12.456	12'264	6
7	13.812	13.692	13.265	13.423	13.274	13.112	12.947	12.767	12.248	12.376	7
8	13.988	13.860	13.721	13.574	13'417	13'249	13.041	12.883	13.684	12.473	8
9	14.148	14'012	13.866	13.410	13.244	13.368	13,181	12.984	12.449	12.226	9
30	14.293	14.140	13'995	13.831	13.657	13.472	13.277	13.071	12.855	12.627	30
1	14.423	14.575	14,110	13,030		13.263	13.360	13.146	12.022	12.686	1
2	14.240	14.382	14'212	14.033		13.642	13.431	13'209	12.978	12'735	2
3	14.645	14'479	14'302	14'115	13.917		13.491	13.262	13.024	12.775	3
4	14.737	14.264	14.380	14.186	13.085	13.767	13.242	13.307	13.065	12.807	4
		_							13.003	12.833	35
35	14.819	14.639	14.448	14'247		13.815	13.284		0 30	12.853	6
6	14.890	14'703	14.206	14.299	14.082				13.112	12.868	7
7	14.951	14.758	14.555	14.343		13.887			13.136	12.879	8
8	15,003	14.805	14.596	14'379		13.913	13.667		13,120	000	9
9	15.048	14.844	14.031	14.408		13.934			13.101		
40	15.082	14.877	14.659	14.432	14.192	13.020	13.697	13.436	13.199	12.894	40
1	15,119		14.681	14'450	14'210	13.962			13.14	12.898	1
2	15'142	14'925	14.699	14.465	14'222	13.972	13.714	13'449	13.148	15,001	2
3	15.165	14.942	14.713	14.476	14.231	13.978			13.181	12,005	
4	15.178	14.955	14.723		14.237	13.083		13.455	13.183	12.003	4
45	15,131	14.965	14.731	1	14.242	13.986	13.725		13.184	12.904	45
6	12,501	14'973	14.737	14'495	14.542	13.989	13.726		13.184	12.904	
7	15.508		14.741	14'498		13,000			13.182		1
8	12.513	14.085	14.744	14.200		13.991	13.728		13.182		
9	15.517	14.985	14.745		14.549	13.992	13.728		13.182		
-	-	- 3-3							-		
	40	41	42	43	44	45	46	47	48	49	
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OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

											CENT.
Dura-	50	51	52	53	54	55	56	57	58	59	Dura-
tion.	12.621	12:332	12.038	11.740	11.439	11.133	10.825	10.514	10.200	9.885	tion.
0	,000	.000	.000	000	.000	000	*000	.000	,000	.000	0
1	'947	*946	'945	*944	°943	'942	*940	'939	'937	935	1
2	1.842	1,839	1.837	1.834	1.830	1.827	1.853	1.818	1.814	1.808	2
3	2'688	2.683	2.678	2.671	2.662	2.658	2.650	2.641	2.632	2.622	3
4	3.487	3.478	3°469	3°459	3°448	3.436	3'423	3.409	3°394	3.377	4
5	4'240	4'227	4°213	4°198	4°182	4.162	4°145	4'125	4°102	4.077	5
6 7	4.948	4'931	4'912	4.891	4.869	4.844	4.818	4.789	4.758	4.724	6
8	5.612	5.201	5.264	5.539	5.210	5'478	5'443	5°405	5°364	5.320	7
9	6.826	6.211	6.179	6.144	6.107	6.066	6.022	5'974	5'922	5.867	8 9
		6.790	6.751	6.708	6.661	6.611	6.222	6.498	6.435	6.366	_
10	7:375	7:330	7.283	7.531	7.175	7.112	7.049	6.979	6.903	6.821	10
2	7.887 8.363	7.834	7.778	7.716	7.650	7.578	7.502	7.419	7'330	7.234	2
3	8.806	8.301	8.236	8.164	8.087	8.004	7.915	7.819	7.716	7.606	3
4			8.659	8°577 8°956	8°489 8°855	8.393	8.291	8.185	8.064	7.939	4
-	9.217	9.132	9.049			8.748	8.632	8.509	8.377	8.237	_
15	9.596	9.204	9.407	9.302	9,189	9.069	8.940	8.802	8.656	8.200	15
6	9°945	9.843	9.734	9.617	9.492	9.358	9'216	9.064	8.902	8.731	6
	10.262	10.12	10'032	9.903	9.765	9.618	9.462	9°295	9,110	8.933	7
8	10.228	10.434	10.305	10,191	10,010	9.850	9.679	9°499	9.309	9,108	8
_	10.822	10.690	10.246	10,395	10.228	10.022	9.871	9.677	9.472	9.258	
20	11.067	10.920	10.764	10.208	10'421	10.532	10.038	9.830	9.613	9.382	20
1	11°285	11.126	10.029	10.780	10,201	10°392	10,185	9°962	9'732	9'491	1
2	11.480	11,310	11,131	10.041	10.740	10.28	10,300	10.074	9.831	9.579	2
3 4	11.622	11°473	11.583	11.081	10,868	10.645	10,411	10.162	9.914	9.651	3 4
_	11.800	11.617	11.412	I,I 202	10.978	10'744	10.499	10°245	9.982	9.710	
25	11.942	11.742	11.229	11.302	11.071	10.859	10.245	10.308	10.036	9.756	25
6	12.063	11.820	11.627	11,303	11,140	10.802	10.632	10,320	10.049	9.791	6
7	12'166	11.943	11.410	11.467	11.514	10.021	10.680	10.400	10,113	9.819	7
8	12°253	12.031	11'780	11.228	11'267	10.992	10.418	10.431	10,138	9.839	8
9	12.358	12.082	11.838	11.248	11.309	11'032	10.747	10°455	10.124	9.854	_
30	12°390	12'142	11.882	11.918	11°343	11,000	10.440	10'473	10'172	9.865	30
1	12'442	12,186	11,053	11.620	11.340	11.085	10.484	10°487	10,181	9.872	1
2	12°484	12°222	11.923	11.675	11,300	11.097	10.499	10°496	10,188	9.877	2 3
3	12.218	12.51	11.977	11.694	11,402	11,100	10'808	10.203	10,103	9'880	4
4	12.242	12.543	11.994	11:708	11°416	11.112	10.814	10.202	10,100	9.882	
35	12.266	12.500	12.008	11.410	11.423	11,153	10,818	10,210	10,108	9.884	35
6	12.282	12.303	12.018	11.726	11.429	11'127	10'821	10.212	10,100	9.884	6
7	12.594	12,312	12.022	11.731	11'433	11.130	10.823	10.213	10'200	9.885	8
8	12'603	12.319	12'029	11.734	11.435	11,131	10.824	10'513	10'200	9.885	9
9	12.609	12°323	12.033	11.737	11'436	11,135	10.824	10.214	10.500	9.885	_
40	12.613	12.326	12'035	11.738	11.437	11,133	10.825	10.214	10'200	9.885	40
1	12.616	12,358	12.036	11.739		11,133				9.885	1 2
2	12.018	12'329	12'037	11.739	11'438	11,133	10'825	10.214	10'200	9.885	3
3 4	12.619	12'330		11.740			10.822	10.214	10'200	9.885	
	12.620	12,331	12.038				10.825	10.214	10°200 58	59	
45	12.621	12.331	12°038	11'740	11.438	11,133	10.825	10.214		50	
6	15.651	12,331	12.038	11.740		11.133	10.822	57	51		
8	15.051	12,331		11.740		11,133		52		12.621	
9	12.021	12,331	12.038		11'439				12.332	12.621	52
0	12 021	12.331	12.038	11.740				12.038	12.332	12.621	1
								12'038	12.332	12.621	50
	F0	Pri 14				pr =0	-6				
	50	51	52	53	54	55	56	52	51	50	

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VALUES OF TEMPORARY ANNUITIES OF 1

0											CENT.
Dura-	60	61	62	63	64	65	66	67	68	69	Dura-
tion.	9.568	9.250	8.932	8.614	8.296	7.979	7.664	7.351	7.010	6.733	tion.
0	*000	000	*000	.000	.000	.000	.000	*000	,000	.000	0
1	'933	.931	929	'927	'924	.021	.918	'914	.010	.906	1
2	1.803	1.797	1.400	1.483	1.775	1.766	1.757	1.747	1.735	1.723	2
3	2.611	2.299	2.285	2.271	2.256	2.239	2,251	2.201	2.479	2°456	3
4	3°359	3'339	3.318	3:295	3.270	3.242	3.513	3,181	3°147	3.110	4
5	4.021	4'022	3,000	3.956	3.020	3.880	3.837	3.791	3'742	3.688	5
6	4.687	4.648	4.605	4.559	4.209	4°455	4.397	4.335	4.268	4.197	6
7	5.272	5.220	5.162	5.104	5.040	4.970	4.896	4.817	4.731	4.641	7
8	5.806	5.741	5.672	5.257	5.216	5°430	5'338	5°240	5.136	5.022	8
9	6.293	6.214	6.139	6.038	5.941	5.837	5.727	5.610	5.485	5'354	9
10	6.734	6.640	6.239	6.432	6.317	6.192	6.066	5.929	5.785	5.633	10
1	7°131	7.022	6.905	6.780	6.648	6.202	6.359	6.503	6.039	5.867	1
2	7.488	7.362	7.228	7.086	6.936	6.777	6.611	6.435	6.522	6.061	2
3	7.806	7.664	7.213	7.354	7.186	7.009	6.824	6.630	6.428	6.510	3
4	8.087	7.929	7.762	7.585	7.400	7.205	7.002	6.791	6.572	6.347	4
15	8.335	8.160	7.976	7.783	7.281	7.370	7.121	6.923	6.689	6.448	15
6	8.221	8.360	8.190	7.951	7.733	7.506	7.272	7.029	6.481	6.22	6
7	8.737	8.232	8.317	8.092	7.859	7.618	7.369	7.113	6.852	6.284	7
8	8.897	8.677	8.448	8.500	7.962	7.707	7.446	7.179	6.907	6.632	8
9		8.799	8.226	8.304	8.045			7.229	6.948	6.665	9
20	9.033			8.381		7.779	7.506			6.688	20
1	9'147	8.900	8.645	8.442	8,123	7.834	7.552	7.267	6.978	6.704	1
2	9°241	8.983	8.716	8.489	8.301	7.876	7.587	7'294	6,999	6.715	2
3	9.318	9.049	8.773			7.908	7.612	7'313	7.014	1	3
4	9.380	9,105	8.817	8.226	8.230	7.931	7.630	7'327	7'024	6.722	4
	9°430	9,143	8.850	8.553	8.252	7.947	7.642	7.336	7.030	6.727	
25	9°468	9°174	8.876	8.573	8.267	7.959	7.651	7:342	7.034	6.730	25
7	9°497	9,198	8.894	8.587	8.277	7.967	7.656	7:346	7.037	6.731	6 7
8	9.219	9.215	8.907	8.596	8.284	7'972	7.659	7:348	7.038	6.732	8
9	9.535	9.227	8.916	8.603	8.289	7.975	7.661	7'349	7.039	6.732	9
30	9.246	9.236	8.922		8.292	7.977	7.663	7.350	7.039	6.733	
1	9.554	9°241	8.926	8.610	8.294	7.978	7.663	7.350	7.039	6.733	30
2	9.260	9°245	8.929	8.612	8.295	7.978	7.664	7'350	7.040	6.733	1
3	9.263	9°247	8.930	8.613	8.295	7.979	7.664	7.351	7.040	6.733	3
4	9.565	9.249	8.931	8.613	8.296	7'979	7.664	7.351	7.040	6.733	0
	9.267	9,520	8.932	8.613	8.296	7.979	7.664	7'351	7.040	69	
35	9.567	9.250	8.932	8.614	8.296	7.979	7.664	7'351	68	40	
7	9.568	9.250	8.932	8.614	8.296	7.979	7.664	67	41		
8	9.568	9.250	8.932	8.614	8.296	7.979	66	42		15.224	
9	9.568	9.250	8:932	8.614	8.296	65	43		14.990	15.224	62
40	9.268	9.250	8.932	63	64	44		14.749	14.990	15.224	1
1	9.268	9.250	8.932		45		14.503	14.749	14.990	15.224	60
2	9.568	9.250	62	46		14.250	14.203	14.749	14.990	15°224	59
	9.268	61	47		13.992	14.250	14.203	14.749	14'990	15.524	8
	60	48		13.729	13'992	14.50	14.203	14.749		15.224	7
	49		13.459	13'729		14.250	14.203		14.990	15.224	6
		13.185	13'459	13.729	13.992	14.250	14.203	14.749	14.990	15.224	5
	12.905	13.182	13'459	13'729	13'992	14'250	14'503	14'749	14'990	15'223	54
53	12.905	13.182	13'459	13.729	13.992	14.250	14.203	14.749	14.989	15.553	3
2	12.905	13.182	13.459	13.729	13.992	14'250	14.203	14.749	14.989	15.555	2
1	12.905	13.182	13.459	13.729	13.992	14.50	14.202	14.748	14.988	15°221	1
50	12.905	13.182	13.459	13.728	13.992	14'250	14.202	14.747	14.987	15.519	50
	40	48		46							
	49	40	47	40	45	44	43	42	41	40	

OM(5) VALUES OF TEMPORARY ANNUITIES OF 1

	70	71	72	73	74	75	76	77	78	79	
Dura- tion.	6.429	6.130	5.835	5.545	5.262	4.984	4.713	4.448	4.191	3.942	Dura- tion.
0	.000	.000	000	000°	.000	000°	0000	000	*000	.000	0
1	'902	.897	.891	*886	.879	.872	.865	.857	*848	.839	1
2	1'710	1.696	1.981	1,664	1.646	1.624	1,000	1.284	1.229	1.233	2
3	2°431	2°404	2'375	2.344	2°310	2.274	2.532	2.193	2.149	2'101	3
4	3.040	3°027	2.981	2.031	2.879	2.822	2.762	2.698	2.630	2.258	4
5 6	3.631	3.570	3.202	3°435 3°862	3'361	3.282 3.663	3,100	3,110	3°325	3°203	5 6
7	4'121	4.442	3°953 4°334	4.550	4,100	3'974	3.556	3°443 3°706	3.265	3.419	7
8	4.908	4.784	4.653	4.217	4'374	4°225	4'071	3,011	3.748	3.280	8
9	5.516	5.040	4.918	4.759	4.595	4°424	4.248	4.068	3.884	3.698	9
10	5.474	5.304	5'134	4°955	4.769	4.579	4.384	4.182	3.984	3.485	10
1	5.688	2.201	5.308	2,100	4.902	4.697	4°485	4.271	4.022	3.840	1
2	5.862	5.657	5.446	5°230	5,000	4.785	4'559	4'332	4°105	3.879	2
3 4	6.003	5.781	5°554	5.322	5.084	4.850	4.612	4°374	4°138	3.004	3 4
15	6.112	5.877	5.636	5,391	5'144	4.896	4.649	4'402	4.140	3.030	15
6	6.505	5.009 9.009	5°697	5°441 5°477	5'213	4°928 4°949	4.689	4°421 4°433	4.143	3°93° 3.936	6
7	6.318	6.046	5.774	5.502	5°231	4 949	4.699	4 433	4.186	3.939	7
8	6°354	6.075	5.796	5.219	5°244	4'972	4.705	4'444	4.189	3.940	8
8	6.380	6.092	5.811	5.29	5.251	4.978	4.709	4'446	4.190	3.941	9
20	6.398	6,108	5.821	5°536	5°256	4.081	4.411	4°447	4°191	3.945	20
1	6.410	6.112	5.827	5°540	5'259	4.982	4.412	4°448	4'191	3'942	1
2	6.418	6.155	5.830	5.543	5.260	4.983	4'712	4°448	4'191	3'942	2 3
3 4	6.423	6.126	5.833	5.244	5.261	4.984	4'713	4.448	4,101	3.942	3
25	6.426	6.158	5.834	5°545	5.261	4.984	4.713	4.448	4'191 78	79	
6	6.427	6.120	5.834 5.835	5°545 5°545	2,565	4°984 4°984	4.713	4°448		30	
7	6.429	6.150	5.835	5°545	5.262	4°984	76		31		
8	6.429	6.130	5.835	5.545	5.262	75		32	17.066	17.242	
9	6.429	6.130	5.835	5.545	74		33	16.886		17.242	72
30	6.429	6.130	5.835	73		34	16.699		17.066	17.242	1
1	6.429	6.130	72	26	_35	16.506	16,600	16.886	17.066	17.242	70
2	6.429	71	37	36	16.307	16.206	16.699	16.882	17.066	17.242	69 8
	70	38		16.103	16.307	16.200	16.698	16.885	17.066	17'242	7
	39		15.892	16.103	16.307	16.206	16.698	16.882	17.066	17.242	6
		15.675	15.892	16.103	16.307	16.209	16.698	16.882	17.066	17.242	5
	15.453	15.675	15.892	16.103	16.304	16.206	16.698	16.882	17.066	17.242	64
63	15.453	15.675	15.892	16.103	16.304	16.206	16.698	16.882	17.066	17.241	3
2	15.453	15.675	15.892	16.103	16.307	16.202	16.698	16.885	17.066	17.241	2
60	15.453	15.675	15.892	16.103	16.307	16.202	16.697	16.885 16.884	17.065	17:240	60
59	15.453	15.675	15.802	16.105	16.307		16.607	16.883	17.063	17.238	59
8	15.453	15.675	15.892	10.105	16.306	16.202	16.696	16.883	17.062	17.235	8
7	15.453	15.675	12.891	16.105		16.203	16.695	16.880	17.059	17.232	7
6	15.453	15.675	15.891	16.101	16.305	16.202	16.693	16.878	17.056	17.228	6
5	15.452	15.675	15.890	16.100	16.304	16.200	16.690	16.874	17.021	17.222	5
54	15.452	15'674	15.889	16.099	16.301	16.497	16.687	16.869	17.045	17.214	54
3	15.451	15.673	15.888	16.097	16.299	16.493	16.681	16.863	17.037	17.304	3 2
2	15.450	15.671	15.886	16:080	16.280	16.488	16.666	16.854	17.026	17'191	1
50	15.448	15.666	15.882	16.083	16.581	16.481	16.654	16.829	16.996	17.126	50
				-							
	39	38	37	36	35	34	33	32	31	30	

 $O^{M(5)}$

VALUES OF TEMPORARY ANNUITIES OF 1

-										1.0	
Dura-	80	81	82	83	84	85	86	87	88	89	Dura-
tion.	3.700	3.467	3.242	3.025	2.817	2.618	2.427	2.245	2.073	1.909	tion.
0	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	0
1	.828	.817	.805	793	.779	.764	.748	731	713	.693	1
2	1.202	1.476	1.444	1.410	1.373	1.332	1'295	1.525	1.304	1,190	2
3	2.021	1'997	1.941	1.88.1	1.818	1.752	1.684	1.613	1.239	1.463	3
4	2.483	2.403	2.320	2.234	2'143	2.020	1.954	1.855	1.755	1.654	4
5	2.810	2.414	2.604	2'491	2.375	2.256	2,139	2.014	1.891	1.769	5
6	3.076	2.946	2.812	2.675			2.54	2'113	1.973	1.835	6
7			5.960	2.802	2.236 2.644	2°395	2'328	2'173	2,031	1.872	7
8	3.569	3.112		2.888	_			2.502	2.047	1.891	8
9	3.409	3.536	3.065		2'714	2.242	2'373	5.556	5.000	1,001	9
	3.209	3,350	3.131	2.944	2.428	2.276	2,399				_
10	3.579	3.376	3.149	2.979	2.785	2.296	2'413	2.536	2.064	1.902	10
1	3.625	3.413	3.501	3.000	2.800	2.607	2,421	2,541	2.040	1.907	1
2	3.656	3.436	3,551	3,015	2.800	5.915	2,424	2,544	2.025	1,008	2
3	3.675	3.450	3.531	3.010	2.813	2.612	2,420	2.542	2.075	1,000	3
4	3.686	3.428	3'237	3.055	2.812	2.617	2'427	2.542	2.043	89	
15	3.693	3.463	3°239	3.054	2.816	2.617	2.427	2.245	88	-	
6	3.697	3'465	3.541	3.025	2.817	2.618	2'427	87		20	
7	3.699	3.466	3.242	3.022	2.817	2.618	86		21	18.705	
8	3.700	3.467	3.545	3.022	2.817	85	-	22	18.581		-
9	3.700	3.467	3.545	3.022	84		23	18.452		18.705	82
20	3.700	3.467	3.242	83		24	10,010		18.281	18.702	1
1	3.700	3.467	82		25	10.100	18.319	18.452	18.281	18.702	80
2	3.700	81		26	10,097	18.180	18.319	18.452	18.281	18.702	79
	80		27	17.888	18.037	18.180	18.319	18.452	18.281	18.702	8
1		28	15,595		18.034	18.180	18.318	18.452	18.281	18.702	7
	29		17.735	17.888	18.037	18.180	18.318	18.452	18.281	18.705	6
		17.576	17'735	17.888	18.037	18.180	18.318	18.452	18.281	18.702	5
	17.412	17.576	17.735	17.888	18.037	18.180	18.318	18.452	18.281	18.705	74
73	17.412	17.576	17.735	17.888	18.037	18.180	18.318	18.452	18.280	18.704	3
2	17.412	17.576	17.735	17.888	18.037	18.180	18.318	18.452	18.280	18.704	2
1	17.412	17.576	17.735	17.888	18.037	18.180	18.318	18.452	18.280	18.704	1
70	17.412	17.576	17.735	17.888	18.037	18.180	18.318	18.451	18.579	18.703	70
69	17.412	17.576	17.735	17.888	18'037	18.180	18.318	18.451	18.579	18.702	69
8	17.412	17.576	17.735	17.888	18.037	18.179	18.317	18.450	18.578	18.701	8
7	17.412	17.576	17.734	17.888		18.179	18.316	18.449	18.576	18.699	7
6	17.411	17.576	17.734	17.888	18.036	18.148	18.315	18.447	18.574	18.696	6
5	17.411	17.576	17.734	17.887	18.032	18.177	18.313	18.445	18.271	18.692	5
64	17'411	17.575	17.733	17.886	18.033	18.175	18.311	18.442	18.567	18.687	64
3				17.885	18.033	18.173	18.308	18.438	18.262	18.681	3
2	17.411	17.575	17.732	17.883	18.032	18.160	18.304	18.432	18.22	18.673	2
li	17.410	17.574	17.731	17.880	18.029	18.162	18.304	18.426	18.247	18.663	1
60		17.572	17.729		18.051	18.120	18.591	18.417	18.537	18.651	60
59	17'407	17.570	17.726	17.876			1		10 53/		
_	17.405	17.567	17.722	17.871	10 015	18.121	18.581	18.406	18.224	18.636	59
8 7	17.402	17.263	17.717			18.142	18.270	18.393	18.209	18.619	8
6	17.398	17.558	17.710	17.857		18.130	18.256		18.490	18.598	7
5	17.392	17.550	17'701	17.846		18.112		18.357	18.469	18.574	6
	17.382	17.241	17.690	17.833		18.097	18.510	18.335	18.444	18.546	5
54	17.375	17.230	17.677	17.817		18.076	18.196	18.308	18.414	18.514	54
3	17.363	17.212	17.660	17.798		18.025	18.168		18.381	18.478	3
2	17.348	17.498	17.640	17.775	17.902	18.053	18.136	18.243	18.343	18.437	2
1	17.330	17.477	17.616	17.748	17.872	17.989	18.100	18.503	18.300	18.391	1
50	17:307	17.451	17.287	17.716	17.837	17'951	18.028	18.120	18.525	18.340	50
	29	28	27	26	25	24	23	22	21	20	
			<u> </u>		-						

OM(5)

VALUES OF TEMPORARY ANNUITIES OF 1

_					EMI ON		NNUIII	ES OF	1		CENT.
Dura-	90	91	92	93	94	95	96	97	98	99	Dura
tion.	1.752	1.606	1.466	1.338	1.212	1.102	.991	•902	.814	.693	tion.
0	.000	1000	.000	.000	.000	*000	.000	.000	.000	.000	0
1	.672	.651	627	.605	577	*553	'521	497	'481	°449	1
2	1,110	1.000	1.006	953	896	:841	.780	.736	.696	634	2
3	1.382	1.307	1'225	1.146	1.065	1985	.905	.844	.785	'693	3
4	1.221	1.449	1.346	1.542	1.142	1.024	.961	.888	.814		0
_								ł .		99	
5	1.647	1.258	1°409	1.592	1.182	1.082	'984	*902	98	IO	
6	1.400	1.269	1.440	1,351	1,503	1.092	,661	97	**	10	
7	1.454	1:589	1.455	1,335	1,510	1,105	96		II	19.719	
8	1.41	1.299	1.462	1,336	1,515	95		12	19.634		
9	1.748	1.604	1°465	1,338	94		13	19.546		19.719	92
10	1'751	1.606	1.466	93		14	10.455		19.634	19.719	1
1	1.752	1.606	92		15		19.455	19.246	19.634	19'719	90
2	1.752			16		19.359	19.455	19.546	19.634	19.719	89
1 "		91	17		19.261	19.359	19°455	19.546	19.634	19.719	8
	90	18		19.158	19.261			19.246	19.634	19'719	7
	70	10	19.051	TO:T#0		19.359	19°455			}	
	19	18.940		19.128	19.261	19.359	19.455	19.246	19.634	19,419	6
	18.825		19.021	19.128	19.561	19.359	19.455	19.246	19.634	19.719	5
		18.940	19'051	19.128	19.561	19'359	19.455	19.246	19.634	19.719	84
63	18.852	18.940	19'051	19.128	19.261	19'359	19.455	19.246	19'634	19'719	3
2	18.824	18.940	19.021	19.128	19.261	19.359	19.454	19'546	19.634	19.719	2
1	18.824	18.940	19.021	19.128	19.261	19.359	19.454	19.546	19.634	19.718	1
80	18.824	18.940	19.021	19.128	19.261	19°359	19.454	19.546	19.633	19.718	80
79	18.824	18.940		_	1						
			19.021	19.124	19'260	19.359	19'454	19.546	19.633	19.717	79
8	18.824	18.940	19.021	19.124	19.260	19.359	19.454	19.545	19.632	19.416	8
7	18.824	18.940	19.020	19.124	19.500	19.359	19.453	19.244	19.631	19.715	7
6	18.824	18.939	19.020	19.157	19.500	19.328	19.453	19.243	19.630	19.713	6
5	18.824	18.939	19.020	19'157	19'259	19.357	19.451	19.242	19.628	19.711	5
74	18.824	18.939	19.050	19.126	19.258	19.356	19.450	19.240	19.626	19.708	74
3	18.824	18.939	19.049	19.122	19.257	19.355	19.448	19.537	19.622	19.704	3
2	18.823	18.938	19.048	19.124	19.522	19.322	19'445	19.534	10.618	19.699	2
ı	18.853	18.937							-	19.692	1
70	18.822	18.936	19.047	19.125	19.253	19.350	19'442	19.230	19.613		
			19.045	19.120	19.250	19.346	19.437	19.224	19.606	19.685	70
69	18.820	18.934	19.043	19'147	19.246	19.341	19.431	19.217	19.298	19.675	69
8	18.818	18.931	19.040	19'143	19'241	19.332	19'424	19.209	19.288	19.664	8
7	18.819	18.928	19.035	19'137	19'235	19.327	19'415	19.498	19'577	19.651	7
6	18.813	18.923	19'030	19'131	19'227	19.318	19'404	19.486	19.263	19.636	6
5	18.807	18.918	19'023	19'123	19'217	19'307	19.392	10'472	19.547	19.618	5
64	18.801	18.910	19'014	19,115	19.206	19'294	19.377	10.455	19.29	19.598	64
3	18.794	18.001	10,001	10,100	19,195	19 294	19.359	19'436	19.508	19.575	3
2	18.784	18.800	18.991	-							
1	18.773	18.877		19.086	19.175	19.260	19'339	19'414	19'484	19.549	2
	18:773		18.976	19.068	19.126	19.239	19,319	19.389	19.456	19.520	1
60	18.759	18.801	18.958	19.048	19.134	19.214	19.290	19.360	19.426	19.488	60
59	18.742	18.842	18'937	19'025	19,100	19°187	19.260	19.358	19.392	19°452	59
8	18.722	18.850	18'912	18.999	19.080	19.129	19'227	19.293	19'354	19.412	8
7	18.699	18.795	18.882	18.969	19.047	19,151	19.189	19'254	19.313	19.368	7
6	18.673	18.766	18.853	18.934	10,011	19.082	19.148	19,510	19.267	19.320	6
5	18.642	18.733	18.817	18.896	18.970	19.039	19,103	19.162	19.217	19.268	5
54	18.608	18.695	18.777	18.854	18.925	18.001		10,110			_
3	18.560	18.653	18.733	0 1			19.023		19.163	10,515	54
				18.806	18.875	18.939	18.998	19.023	19.104	19.121	3
2	18.25	18.607	18.683	18.754	18.820	18.883	18.938	18.991	19,040	19.082	2
1	18.476	18.255	18.629	18.697	18.760	18.819	18.874	18.924	18.971	19.014	1
50	18.422	18.498	18.269	18.634	18.695	18.752	18.804	18.852	18.897	18.938	50
	19	18	17	16	.15	14	13	12	II	10	
	-7				-3	-4	-3				
					20						

RATIOS OF ANNUITIES-DUE.

FOR COMPARISON OF POLICY-VALUES.

$$\frac{H^{\text{M}}}{0^{\text{M}}}, \ \frac{H^{\text{M}}}{0^{\text{M}(5)}}, \ \frac{H^{\text{M}(5)}}{0^{\text{M}}}, \ \frac{H^{\text{M}(5)}}{0^{\text{M}(5)}}, \ \frac{0^{\text{M}}}{0^{\text{M}(5)}}$$

 $2\frac{1}{2}$, 3, and $3\frac{1}{2}$ per cent.

RATIOS OF ANNUITIES-DUE

HM, HM(5), OM, OM(5)

 $\frac{\mathbf{a}_x}{\mathbf{a}'_x}$

FOR COMPARISON OF POLICY-VALUES

 $2\frac{1}{2}$ PER CENT.

				77716	0.15		7711	771	7735/80	7735(r)	0.16	
	$\overline{\mathrm{H}_{n}}$	$H_{\rm M}$	H ^{M(5)}	H ^{M(5)}	OM		$\overline{\mathrm{H}_{\mathrm{M}}}$	HM	H ^{M(5)}	H ^{M(5)}	OM	
Age	O_M	OM(5)	O_M	OM (5)	O ^{M(5)}	Age	OM	OM(5)	$O_{\mathcal{M}}$	OM(5)	OM(5	
					7						-	
a	f_x	g_x	h_x	j_x	k_x	x	f_x	$g_{\boldsymbol{x}}$	h_x	j_x	k_x	
			10060	******	T:00=6		•00==	•086	1 '9786	*0707	7:000	
20 21	°9708	9956	'9360 '9375	.0900	1.0226	65 66	*9855 *9854	·9862		*9795 *9796	1,000	-
22	9732	9953	9373	9614	1.0559	67	9850	'9856	9789	9796	1,000	-
23	9746	9952	'9433	.9633	1'0212	68	.9841	9840		9788	1,000	
24	.9758	.9951	9470	.9656	1.0197	69	9822	982!		9774	1.000	4
25	.9768	9947	9507	.9681	1.0183	70	.9798	1 980:		9751	1,000	3
26	9776	9942	9540	9702	1'0170	71	9770	9773		9722	1,000	_
27	9782	9937	9568	9719	1.0128	72	9745	9740		.9693	1,000	2
28	.9789	9932	.9596	9735	1'0145	73	9727	9728	3 '9671	'9672	1,000	I
29	9797	.9928	.9619	.9748	1.0134	74	9723	9724	1 '9664	.9662	1,000	I
30	9805	9926	9638	9757	1'0123	75	9735	973	9677	9677	1,000	0
31	.9814	9925	.9653	9762	1,0113	76	9747	'974'		.9691	1,000	0
32	9822	9925	.9666	9767	1.0104	77	9760	9760	9711	.9711	1,000	0
33	.0830	9924	.9677	'9770	1,0009	78	9775	'977		'9724	1,000	
34	.9837	9924	.9686	'9772	1,0080	79	'9784	·978	4 9736	'9736	1,000	0
35	'9844	9924	.9694	9773	1,0085	80	9791	'979	9752	'9752	1,000	0
36	.9849	9924	9704	'9778	1.0016	81	'9807	.980		'9771	1,000	
37	.9856	9925	.9716	'9784	1.0040	82	'9846	.9840	9808	.9808	1,000	
38	'9862	9928	'9727	'9791	1.0066	83	.9909	.090	-	.9868	1,000	
39	.9869	.9930	'9739	'9799	1,0005	84	1,0003	1,000	3 9949	'9 949	1,000	00
40	.9876	9933	9749	.0806	1.0028							
41	.9880	9934	9757	.9810	1.0022				NOTE.			
42	9883	9934	9761	9812	1.0025			4 1			_	_
43	'9884 '9883	9932	9764	.0800	1.0049	77 hrs	the		T/ hrrtha			
	9882	'9930		.9806	1.0042	$_{n}\mathbf{\nabla}_{x}$ by			$_{n}\nabla'_{x}$ by the			
45	9882	9927	'9762 '9762	9803	1.0043	HM Tal	ole,		OM Table,	$\operatorname{as} f_x$	f	x+n
47	9882	9923	9762	9802	1'0041				OM(5) ,,	,, g _x	a	x+n
48	.9885	9923	9764	.0801	1.0039	"	"				3.	271
49	9887	9925	'9767	.9803	1'0038	,,	,,		OM & OM(5) Ta	ables ,, f_x	g	x+n
50	.9890	9925	9772	.9806	1'0035	HM(5)	33		OM Table,	$,, h_x$	h	x+n
51	9892	9925	9777	.9810	1'0034			i				
52	'9891	'9923	'9781	.0813	1.0033	,,	"		OM(5) "	» Ĵx	1.	x+n
53	.9889	9920	.9784	.0812	1,0031	,,	,,	>=<	ОМ & ОМ(б) Та	bles ,, hx	> = $<$ j .	x+n
54	.9888	.9917	.9788	.0819	1,005		[M(5) Tables,					
55	.9885	9912	'9790	.9817	1.0052	Har & E	Tables,		O ^M Table,	», fx	"	x+n
56	9882	9907	9790	.9812	1.0052	31	33		OM(5) ,,	,, g _x	j	x+n
57	19879	9902	9791	9813	1'0023				OM & OM(5) Ta	bles &		
58 59	9875	9889	9790	9811	1'0021	>>	"			Jx	3	x+n
					_	OM Tal	ole,		OM(5) Table,	$,, k_x$	Y.	x+n
60	9861	9882	9784	9801	1,0019				OM & OM (5) Ta	bles 1	λ.	x+n
62	9858	9871	9780	9797	1.0014		33		10	,, .		
63	9855	9867	9778	9793	1'0012	OM(5)	19		,, »	,, 1	k	x
64	9855	.9865	.9780	9791	1,0011		_	3				-
	33	1	1	7.7								_

RATIOS OF ANNUITIES-DUE

 H^{M} , $H^{M(5)}$, O^{M} , $O^{M(5)}$

 $\frac{\mathbf{a}_x}{\mathbf{a}_x'}$

FOR COMPARISON OF POLICY-VALUES

3 PER

											7	
	$\mathbf{H}^{\mathbf{M}}$	$\mathbf{H}_{\mathbf{M}}$	H ^{M(5)}	H ^{M(5)}	O_{M}		$\mathbf{H}_{\mathbf{M}}$	H_{M}	H ^{M(5)}	HM(5)	0	м
Age	O _M	OM(5)	OM	OM(5)	OM(5)	Age	$\overline{O_{M}}$	OM(5	Ом	OM(5)	Oy	1(5)
-8-						Ü						
x	f_x	g_x	h_x	j_x	k_x	x	f_x	g_x	h_x	j_x	k	x
20	9720	.9961	.9385	.9618	1.0248	65	·9860	.987	9793	·9802	1,00	
21	9731	.9958	.9398	.9618	1.0533	66	.9859	.986		.9803	1,00	
22	9744	'9957	9424	9630	1.0510	67	.9855	'986		'9802	1,00	_
23 24	9757	9957	9455	·9648 ·9671	1,0502	68 69	'9846 '98 27	·985		'9 795 '9 7 82	1,00	
	9769	'9955	'9490	.9695	1,0101	70	9804	.080		'9757	1,00	
25 26	.9778 .9785	'9952 '9946	9526	9095	1.0128	71	9775	977		9737	1.00	-
27	9792	9940	9586	9732	1'0152	72	9749	975		9700	1,00	-
28	'9798	.9936	9612	9747	1'0141	73	9732	973	1	.9679	1.00	002
29	.9806	'9933	.9635	.9760	1.0130	74	.9728	'972	8 '9670	.9670	1,00	000
30	.9813	.9931	.9654	.9769	1.0150	75	'9739	'973		9682	1,00	
31	.0822	.9930	.9668	9775	1,0110	76	9751	975		.9692	1,00	
32	'9830	.9930	.9681	9779	1,0101	77	'9764	*976		9716	1.00	
33	·9838 ·9844	'9929	·9692	.9781 .9782	1,0086	78 79	'9778 '9785	*977 *978	8 ·9 72 8 5 ·9 73 9	'9728	1.00	
		9928			1,0080	80		'979		9755		000
35 36	·9850 ·9856	'9929 '9928	'9 7 07	.9784 .9789	1.0024	81	'9792 '9808	979	8 9772	9755		000
37	9862	9920	9728	9794	1,0098	82	9848	.984		.9810	1	000
38	'9869	9932	9739	.0801	1.0064	83	9908	.990		.9870	1.0	000
39	.9875	9934	9751	.9809	1,0000	84	1,0003	1,000	3 '9952	'9952	1,0	000
40	.9881	'9937	9760	.9816	1.0026			1		-		_
41	.9886	'9939	.9768	.9820	1.0023				NOTE.			
42	'9889	'9938	9772	.0851	1,0020							
43	.9889	9937	9774	.9818	1.0048	$_{n}\mathbf{ abla}_{x}$ by	the		$_{n}\nabla'_{x}$ by the			
45	'9888	,0031	9772	.9814	1'0044			1	7			
46	9887	9931	9771	9812	1.0045	HM Tal	ole,		O ^M Table,	$\operatorname{as} f_x$		f_{x+n}
47	9888	.9928	9771	.9810	1.0040	,,	,,		OM(5) ,,	" g _x		g_{x+n}
48	.0891	9928	9773	.9810	1,0038		-		OM & OM(5) Ta	hlon f		<i>a</i> .
49	.9892	9928	.9776	.0811	1.0036	"	,,		022 00 022(0) 18	thles f_x		g_{x+n}
50	.9895	.9930	.9780	.9814	1.0032	HM(5)	,,		OM Table,	$,, h_x$		h_{x+n}
51 52	'9897 '9897	.9930	9785	9818	1.0034	,,	,,		OM(5)	9, jx		j_{x+n}
53	.9895	9928	'9793	9823	1,0030		"		034 4 035(0) 89			
54	.9893	.9921	9796	.9824	1.0058	"	"	>=<	Om & Omio, 1;	ables ,, h_x	>=<	j_{x+n}
55	.9890	.9916	9797	.9823	1.0026	Hn % H	IM(5) Tables	,	OM Table,	$,,f_x$		h_{x+n}
56	.9888	1166.	9799	9822	1.0054		**		OM(5)	,, g _x		j_{x+n}
57	'9884	.9906	.9798	9820	1'0022	,,	"					
58	.0880	.0801	9798	9819	1,0055	,,,	33		OM & OM(5) T	soles ,, Jx		j_{x+n}
59	.9875	.9895	'9795		1'0020	OM Tal	ole,		OM(5) Table,	$,, k_x$		k_{x+n}
60	9870	.9887	'9791 '9788	9807	1,0019				Ом & Ом(5) Та	ables 1		k_{x+n}
62	9863	9877	9786	9800	1.0014		,,					
63	.9860	.9873	.9786	.9798	1,0013	OM(5)	,,)) 'J)	,, 1		k_x
64	9860	9871	9787	9798	1.0011			_				

RATIOS OF ANNUITIES-DUE

HM, HM(5), OM, OM(5)

 $\frac{\mathbf{a}_x}{\mathbf{a}_x'}$

FOR COMPARISON OF POLICY-VALUES

 $3^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

Age	$\frac{\mathrm{O}_{\mathrm{M}}}{\mathrm{H}_{\mathrm{M}}}$	<u>Ом(5)</u>	O _M	HM(5)	O _M (2)	Age	$\frac{O_{M}}{H_{M}}$	О М(5	$\frac{\mathbf{H}^{\mathbf{M}(5)}}{\mathbf{O}^{\mathbf{M}}}$	H _{M(5)}	$\frac{O_{p}}{O}$	_
x	f_x	g_x	h_x	j_x	k_x	x	f_x	g_x	h_x	j_x	k	æ
20 21 22 23 24 25 26	'9732 '9742 '9755 '9768 '9778 '9787	'9965 '9962 '9961 '9959 '9956 '9951	'9409 '9422 '9446 '9475 '9509 '9544 '9576	'9634 '9634 '9646 '9663 '9685 '9708	1.0239 1.0225 1.0212 1.0198 1.0185 1.0172 1.0159	65 66 67 68 69 70 71	.9865 .9864 .9861 .9851 .9834 .9809	987. 987. 986. 985. 983.	9802 9803 9796 9785 9761	.9808 .9809 .9809 .9801 .9788 .9764	1,00 1,00 1,00 1,00 1,00	008 006 005 004
27 28 29 30 31 32 33	9795 9801 9807 9814 9821 9829 9837 9845	.9946 .9941 .9938 .9935 .9934 .9934	.9603 .9628 .9650 .9668 .9682	'9745 '9760 '9772 '9780 '9785 '9789	1.0139 1.0137 1.0126 1.0106 1.0098	72 73 74 75 76 77 78	9755 9755 9736 9732 9742 9754 9767 9781	975 973 973 974 975 976	7	9705 9685 9676 9689 9699	I,00 I,00 I,00 I,00 I,00	002 001 001
34 35 36 37 38 39 40	9857 9857 9862 9869 9875 9881	'9934 '9933 '9933 '9934 '9936 '9938	9705 9712 9719 9729 9740 9750 9762	9793 9793 9794 9799 9804 9810 9818	1'0083 1'0077 1'0071 1'0066 1'0062	79 80 81 82 83 84	9788 '9793 '9809 '9849 '9909 1'0003	978 979 980 984 990	8 '9743 4 '9757 9 '9775 9 '9811 9 '9872	'9731 '9743 '9757 '9775 '9811 '9872 '9953	1,00 1,00 1,00 1,00	000
41 42 43 44	.9892 .9894 .9895 .9894	'9941 '9942 '9942 '9941 '9938	'9771 '9779 '9782 '9784 '9783	.9829 .9829 .9829	1'0055 1'0051 1'0046 1'0045	$_{n}\mathbf{V}_{x}$ by	the		NOTE. $_{n}\nabla'_{x}$ by the			
45 46 47 48 49	.9893 .9893 .9894 .9895 .9898	'9935 '9933 '9932 '9932 '9933	9781 9780 9781 9781	9823 9820 9819 9817	1'0042 1'0041 1'0037 1'0036	HM Tab	ole,		O ^M Table, O ^{M(5)} ,, O ^M & O ^{M(5)} Ta			f_{x+n} g_{x+n} g_{x+n}
50 51 52 53 54 55	'9900 '9901 '9902 '9899 '9896	'9934 '9933 '9932 '9929 '9925	'9789 '9794 '9798 '9801 '9804	.9822 .9825 .9829 .9829 .9831	1.0034 1.0032 1.0031 1.0027 1.0025	"	» » (M(5) Tables,	>=<	OM Table, OM(5) ,, OM & OM(5) Ta OM Table,	$ \begin{array}{cccc} ,, & h_x \\ ,, & j_x \\ \text{bles} & ,, & h_x \\ ,, & f_x \end{array} $	>=<	j_{x+n} j_{x+n} j_{x+n} h_{x+n}
56 57 58 59 60	.9892 .9889 .9885 .9880	'9916 '9911 '9906 '9899	9806 9806 9805 9802	.9829 .9827 .9825 .9821	1.0024 1.0022 1.0019 1.0018	,, O ^M Tab	,, ,,		OM(5) ,, OM & OM(5) Table,	,, g _x bles ,, f _x		j_{x+n} j_{x+n} k_{x+n}
61 62 63 64	·9871 ·9867 ·9866 ·9865	·9886 ·9881 ·9877 ·9876	'9796 '9793 '9793 '9794	'9810 '9806 '9805 '9804	1'0015 1'0014 1'0010	OM(5)	» •		OM & OM(5) Ta	,, 1	-	k_{x+n}

0^{M}

$2^{\frac{1}{2}}$ per cent.

VALUES OF ANNUITIES ON TWO JOINT LIVES.

Age of	Age of E	Elder Life	Reference
Younger Life (at side).	(At top).	(At bottom).	page in Tables.
10-19	10-19	_	214
10-29	20-29		215
10-39	30-39		216
10-49	40-49		217
10-59	50-59	_	218
10-59	60–69	_	219
10-59	70-79		220
10-59	80-89	. —	221
10-59	90-101	_	222
60-61	_	60-61	218
60-71		62-71	217
60-81	-	72-81	216
60-91	_	82-91	215
60-101	_	92-101	214

OM

VALUES OF ANNUITIES ON TWO JOINT LIVES

 $2^{\frac{1}{2}}_{\text{CENT}}$

											CENT.
x					3	y			1		x
	10	II	12	13	14	15	16	17	18	19	
10	23.851	23.730	23.603	23.470	23.330	23.183	23.030	22.869	22'703	22.229	10
	10	23.613	23.489	23.360	23,553		22'930	22.772	22.609	22.439	1
	IOI	11	23.369	23.543	23,110	22.970	22.824	22.670	22'510	22.343	3
		100	12	23'120	22.864	22.854	22.202	22.447	22.405	22'242	4
101	.108		99	13	14				22.294	22.132	
100	.139	.199		98		22.603	22'467	22.322	22.022	51,000	15
99	152	*222	*255		97	15	16	22.063	21,025	21'774	7
8	163	'241	.278	*306		96		17	21.785	21.641	8
7 6	.168	251	292	323	341	*384	95		18	21.202	9
5	176	°265	.309	'342 '367	·362 ·389	304	447	94		19	
			.331						93		
94	195	298	.350	390	414	'44I	·476	.208	.582	92	
2	204	*314 *328	37 ²	°414	°441	°470 °497	·509	°543 °576	617	.656	92
1	'220	343	410	459	491	525	*569	.610	655	.697	1
90	.227	357	.428	'481	515	.221	598	.642	.691	.736	90
89	*235	*370	445	.502	.539	.578	.628	.675	.727	.776	89
8	*241	383	'462	.523	*562	.603	·656	.706	761	.814	8
7	*247	394	.478	*542	.584	·628	·68 ₄	737	.796	.852	7
в	*253	.406	' 494	.261	.605	.652	'711	.767	.829	·889	6
5	*258	*416	.208	579	.626	.674	.736	[.] 795	.861	924	5
84	*263	*426	522	*596	.645	.696	.761	1823	·892	959	84
3	'268	°435	535	612	·664	717	.785	·850	922	1992	3
2	.272	°444	547	.627	.681	'737	·807	.875	'950	1'024	2
80	·276	452	559	'642	.698	756	·8 2 9	.899	'978	1.022	1 80
	*280	*460	.240	.655	'714	774	'849	.922	1,004	1.084	
79	*284	•467	·580	·668	.728	'790	·868	'944	1'029	1'112	79
8 7	*287 *290	°473 °480	·589	.680 .680	742	·806	·886	*965 *984	1.027	1,128	8 7
8	1293	485	*598 *606	701	.755 .768	.835	°903	1'002	1.074	1,184	8
5	*295	490	614	701	7779	*848	*935	1.020	1,112	1,500	5
74	297	495	621	720	790	·86o	*949	1,036	1,133	1,530	74
3	300	*500	627	.728	799	.872	*962	1,021	1,120	1,520	3
2	*302	.504	.633	.736	.809	'882	974	1.062	1,199	1,568	2
1	.303	.208	.639	743	817	.892	985	1.078	1,185	1.586	1
70	.302	.211	644	750	.825	.001	·996	1,000	1,199	1.305	70
69	*307	514	·649	.756	.832	.010	1,006	1,101	1.500	1'317	69
8	.308	517	.653	762	.839	918	1'015	1,115	1,551	1,331	8
7	.309	.20	.657	.767	'845	925	1.024	1,155	1,535	1.344	7
6	.310	523	.661	'772	.821	932	1,031	1.131	1.243	1.326	6
5	312	525	.664	.776	.857	.938	1,039	1,139	1,525	1.364	5
64	.313	527	.667	.480	.861	'944	1.042	1.144	1,591	1,377	64
3	.313	529	.670	.784	.866	949	1,025	1'154	1,540	1'387	3
2	314	.231	673	•788	.870	954	1.024	1,101	1.277	1,396	2
60	315	°533	·675 ·678	791	·874 ·878	*958 *962	1.063	1.172	1,584	1.411	60
		334									
	101	100	99	98	97	96	95	94	93	92	

OM

VALUES OF ANNUITIES ON TWO JOINT LIVES

 $2^{\frac{1}{2}}$ PER

ш					3	/					
x	20	21	22	23	24	25	26	27	28	29	x
10	22.348	22.161	21.888	21.468	21.262	21.350	21,093	20.907	20.617	20°441	10
2	22'170	21.989	21.803	21.609	21,410	21.504	20,005	20.773	20°549	20.319	2
3	22'072	21.895	21'712	21.22	21.326	21,153	20'914	20.699	20°479	20'252	3 4
14	21.968	21.489	21.616	21,429	21,539	21.037	20.242	20.621	20'403	20,143	15
15 6	21.858	21.227	21,213	21,331	21,145	20°946 20°850	20.745	20.537	20°323	20'020	6
7	21.619	21.459	21.290	21,119	20.935	20'747	20.223	20.323	20°147	19.933	7
8	21.491	21.334	21.170	21.000	20.823	20.640	20'449	20.223	20.020	19.841	8
9	21.355	21.505	21.043	20.877	20'704	20°525	20.339	20°147	19.948	19.743	9
20	21,513	21.064	20.769	20.747	20.579	20.405	20,101	20.035	19.841	19.640	20
	20	21	20.623	20'470	20,311	20.142	19'973	19'793	19.608	19'417	2
1	91		22	20,322	20.164	20.006	19.838	19.663	19.483	19.296	3
91	'742	90	90	23	20.012	19.860	19.697	19.228	19.352	19,169	4
90	.784	.831	89	88	24	19.709	19.221	19.386	19'215	19.038	25
89	.828	.878	.929		87	25	19.397	19.082	19'072	18.899	6 7
8	.870	.024	.979	1.034		86	26	27	18.766	18.604	8
7	.911	.969	1,020	1.088	1,146	_	85		28	18.446	9
5	'952 '991	1.014	1.048	1,141	1,504	1,350	1,392	84		29	
84	1,030	1,100	1.123	1.542	1,314	1,300	1'461	1,233	83	82	
3	1.064	1.141	1,518	1.592	1,345	1,449	1.226	1.603	1.679		
2	1,103	1,181	1.565	1.343	1.425	1.208	1,200	1.672	1.753	1.834	82
1	1.134	1'219	1,302	1,390	1.477	1.264	1.652	1'739	1.826	1,013	80
80	1,140	1,526	1,342	1.436	1.227	1,619	1'712	1.805	1.898	1,000	79
79	1,531	1,352	1,382	1,479	1.275	1.673	1.440	1.869	1.968	2.062	8
7	1,529	1.326	1.458	1,261	1.666	1.773	1.881	1,000	2,100	2,310	7
6	1.586	1.384	1,495	1.299	1.408	1.820	1.033	2.048	2.163	2.279	6
5	1,315	1.412	1.234	1.635	1.48	1.862	1.983	2,103	2.554	2.345	5
74	1.332	1,442	1.224	1.669	1.786	1.907	2.030	2°155	2.585	2'409	74
3 2	1.328	1.467	1.283	1'701	1.823	1.948	2.012	2.202	2.337	2.470	2
1	1,398	1.214	1.635	1.400	1.889	2.022	2.128	5,508	2.440	2.284	1
70	1.417	1.232	1.659	1.787	1.920	2.057	2.197	2.341	2.487	2.637	70
69	1.434	1.254	1.681	1.812	1.948	2.089	2,533	2.381	2.232	2.686	69
8 7	1,450	1.572	1.702	1.836	1.975	2,110	2.267	2.419	2.222	2.734	8 7
6	1.465	1,200		1.858	2.000		2.328	2°454 2°488	2.612	2.778	6
5	1,495	1.620	1.756	1.898	2.042	5,138	2.326	2.219	2.687	2.859	5
64	1.204	1.634	1.772	1.915	2.062		2.385	2.248	2.720	2.896	84
3	1.212	1.646	1.486	1.935	2.084	2.242	2.406	2.246	2.421	2.930	3
2	1.225	1.658	1.800	1.947	2'101	2.262	2.429	2.601	2.779	2.963	2
60	1.234	1.679	1.812	1.962	2.135 5.135	5.5 80	2°449 2°469	2.625	2.831	3,030	60
	91	90	89	88	87	86	85	84	83	82	

OM

VALUES OF ANNUITIES ON TWO JOINT LIVES

 $2^{\frac{1}{2}}_{\bar{2}}^{PER}_{CENT.}$

											CENT.
0,						<i>y</i>					
x	30	31	32	33	34	_ 35	36	37	38	39	x
10	20,199	19.953	19.700	19'442	19.178	18.008	18.632	18.351	18.064	17.771	10
1	20'143	19.899	19.649	19.393	19,135	18.864	18.291	18,315	18.027	17.736	1
2	20'084	19'842	19.294	19.341	19.085	18.817	18.246	18.270	17.987	17.698	2
3 4	19,020	19.780	19.236	19.582	19'029	18.767	18.498	18.224	17.943	17.612	3
15		19'714	19.473			18.654	18.391	18.155	17.847		
6	19.877	19.264	19,334	10,003	18.846	18.292	18.335	18.066	17.794	17.565	15
7	19,714	19,489	19'258	19'020	18.776	18.226	18.269	18.002	17.737	17.461	7
8	19.626	19.405	19.177	18.943	18.703	18.455	18.202	17.942	17.676	17.403	8
9	19.232	19.314	19,001	18.860	18.624	18.381	18.131	17.874	17.611	17'341	9
20	19.433	19.519	19,000	18.774	18.540	18.301	18.022	17.802	17.542	17.276	20
1	19.329	19,119	18.904		18.452	18.217	17.975	17.726	17.470	17.207	1
2	19,518	19,013	18.802	18.584	18.359	18.138	17.890	17.645	17.393	17.133	2
3 4	19,105	18.903	18.695		18.262	18.034	17.800	17.559	17:312	17.026	3
	18.081	18.785	18.283	18.375	18.120	17'936	17.706	17.469	17.226	16.888	
25	18.853	18.663	18°465	18.521	18.021	17.832	17.607	17.375	17.135	16.498	25
7	18.280	18.400	18.342	18.143	17.817	17.723	17.394	17'171	16.041	16.703	7
8	18.435	18.500	18.077	17.888	17.693	17.489	17'279	17.061	16.836	16.603	18
9	18.583	18.113	17.936	17.752	17.562	17.364	17.159	16.946	16.726	16.498	9
30	18.125	17.959	17.789	17.610	17.425	17.233	17'033	16.826	16.611	16.388	30
	30	17.800	17.634	17.462	17.282	17.095	16.901	16.699	16.490	16.272	1
		31	17.474	17.307	17.133	16.952	16.763	16.264	16.364	16.125	2
	81	90	32	17.145	16.977	16.802	16.619	16.429	16'230	16.024	3
81	1'997	80	70	33	16.814	16.645	16.468	16.284	16.095	15.891	4
80	2,081	2.141	79	78	34	16.481	16.310	16.135	15.946	15.752	35
79	2.163	2.259	2.323		77	35	16.142	15.807	15.633	15.605	8
8	2.245	2°345	2.446	2.545	-	76	36	37	15'466	15,501	8
8	2,350	2.429	2°536	2.643	2'747		75		38	15.155	Ð
5	2.395	2.210	2.625	2.438	2.849	2.062		74		39	
74			2'710		2°949	3.062	3.179	2:43.0	73		
3	2.537	2.665	2.793	3.006	3.042	3. 169	3,399	3.410	3.650	72	
2	2.668	2.809	2.020	3,000	3,130	3.368	3.202	3.639	3.771	3.900	72
1	2.729	2.876	3.053	3.140	3'317	3.463	3.607	3.749	3.889	4.026	1
70	2.788	2'940	3.093	3°247	3'401	3.553	3.705	3.855	4.003	4'148	70
69	2.843	3.001	3.160	3,351	3.481	3.641	3.800	3.957	4.113	4.266	69
8	2.895	3.020	3.224	3,391	3.557	3.724	3.890	4.026	4.519	4.380	8
7	2.945	3.114	3.584	3°457	3.630	3.804	3'977	4.149	4'320	4.489	7
6 5	2.991	3.162	3'342	3.250	3.700		4.060	4.239	4.418	4.595	6
	3.032	3'214	3.396	3.579	3.765	3.951	4.138	4'325	4.211	4.695	5
84	3.076	3.500	3.446	3.636	3.827	4.019	4.513	4°406 4°483	4.599	4.791 4.882	84
2	3,114	3°3°3 3°343	3°494 3°539	3.688 3.738	3.882	4.084	4.350	4.556	4.683	4.969	2
1	3.184	3,380	3.281	3.784	3,941	4'201	4'412	4.625	4.838	5.021	1
80	3.512	3.415	3.620	3.828	4.040	4.254	4.471	4.689	4.909	5.158	60
	81	80	79	78	77	76	75	74	73	72	
							13	7.4	10		

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VALUES OF ANNUITIES ON TWO JOINT LIVES

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					3	y					
x	40	41	42	43	44	45	46	47	48	49	x
10	17.472	17'167	16.856	16.239	16.516	15.888	15.224	15.512	14.871	14'522	10
1 2	17.439	17.105	16.826 16.794	16.481	19,195	15.864	15.231	15.134	14.850	14.482	2
3 4	17:364	17.065	16.760	16.449	16.038	15.808	15'479	15.112	14.805	14'460	3 4
15	17.322	16.083	16.682		16.065	15'743	15'449	15.084	14.751	14'410	15
В	17.229	16.938	16.639	16.332	16.024	15.404	15.384	15.022	14.721	14.381	6 7
8	17'178	16.888	16.244	16.242	15.983	15.668	15'347	15'021	14.688	14.351	8
9	17.065	16.481	16.491	16.192	15.892	15.285	15.566	14.944	14.617	14.584	9
20	17.003	16.425	16.435	16'142	15.842	15.235	15.522	14.903	14.577	14.246	20
2	16.867	16.294	16.314		15.789	15'432	15.124		14'491	14.165	2
3 4	16.794	16.24	16.248		15.673	15.376	15.072	14.760	14'443	14'121	3 4
25	16.634	16.450	16.177		15.244	15.316	14.012	14.708	14.394	14.074	25
6	16.248	16.591	16.056	15.754	15.474	15.188	14.894	14.293	14.286	13.972	8
7 8	16.458	16'114	15°944 15°858	15.676	15'401	15.118	14.828	14.231	14.166	13.860	7 8
9	16,363	16.019	15.768		15'243	14.968	14.687	14.398	14'102	13.799	9
30	16.124	15.020	15.673	15.419	15.157	14.887	14.610	14°326	14'034	13.736	30
1 2	16.048	15.402	15°574 15°469		15.067	14.803	14.230	14.170	13.887	13.668 13.668	1 2
3	12.811	15.289	15.359	15.150	14.874	14.619	14'357	14.086	13.809	13'523	3
35	15.683	15.468	15'243	15.010	14.769	14.520	14.263	13.998	13.725	13.445	4
6	15.220	15.339	15'121	14'894	14.659	14'416	14.060	13.802	13°543	13°361	35 6
7	15.262	15.064	14.858	14.644	14'421	14.189	13'949	13.401	13.445	13.180	7
8 9	15.108	14.760	14.212	14.366	14.120	14'067	13.833	13.474	13.341	13.082	8
40	14.775	14.597	14'411	14.516	14'012	13.801	13.280	13.351	13.113	12.867	40
	40	14'425	14.246	14.058	13.862	13.657	13'443	13.550	12.859	12.750	1 2
	71	41	42	13.418	13.203	13.345	13'146	12.937	12.720	12.495	3
71	4.160	70	69	43	13,361	13.177	12.985	12.784	12.274	12.326	4
70	4.290	4.428		68	44	13°001	12.816	12.453	12'421	12'210	45 6
69	4°416 4°538	4.263 4.693	4.706 4.845	4:003	67		46	12.274	12.088	11.893	7
7	4.656	4.819	4 979	4.992 2.136	5.584	66	65	47	11 . 909	11.21	8 9
6 5	4.769 4.878	4'941	2,100	5°274 5°408	5°435	5.243		64		49	
64	4.081	5.024	5°234 5°354	5.236	5°577 5°714	5.742 5.888	5.902 6.056	6.550	63	62	
3	5.080	5.276	5.469	5.659	5.846	6.028	6.500	6.378	6.246		20
2	5.174	5°378 5°474	5.579 5.683	5°777 5°889	5°972 6°093	6.163	6°349 6°487	6.531	6.863	6·877 7·042	62
60	5.347	5.266	5.485	2.996	6.308	6.415	6.619	6.818	7.013	7.200	60
	71	70	69	68	67	66	65	64	63	62	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

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x					1		1 -6		-0		x
	50	51	52	53	_ 54	55	56	57	58	59	
10	14.168	13.811	13.449	13.084	12.216	12.346	11.974	11.000	11.552	10.820	10
1	14'151	13.794	13.434	13.040	12.403	12.334	11.963	11.200	11,519	10'842	1
2	14,135	13.776	13.417	13.022	12.689	15,351	11.951	11.248	11.502	10.833	2
3	14'111	13.757	13°400	13.038	12.674	12.307	11.937	11.266	11'194	10.822	3
4	14.088	13.736	13.380		12.657	15,501	11.923	11.223	11,185	10.810	4
15	14.064	13.413	13.328	13,000	12.638	12.274	11.002	11.239	11,198	10.408	15
8	14.037	13.688	13.336	12.978	13.918	12.252	11.890	11.252	11.124	10.484	6
7	14.000	13.662	13,310	12.955	12.596	12.532	11.871	11.202	11.138	10.769	7
8 9	13.978	13.633	13.284	12'930	12.574	12'214	11.851	11.486	11'120	10.754	8
	13.946	13.603	13.525	12.003	12.248	12'190	11.829	11.466	11,101	10.436	9
20	13.011	13.269	13.224	12.875	12,251	12'165	11.806	11.444	11.085	10.414	20
1	13.874	13.235	13,105	12.844	12.493	12.138	11.481	11.422	11,000	10.698	1
3	13.834	13.498	13'157	12.812	12.463	12,110	11.755	11.397	11.037	10.676	2
4	13.748	13.459	13.085	12.778	12'430	12.080	11.427	11'371	11.013	10.624	3 4
		13.417		12'741	12'397			11.344	10.088	10.630	
25	13.702	13.374	13.041	12.703	12.361	12'015	11.666	11.312	10.061	10.606	25
6 7	13.653	13.328	12.998	12.663	12.323	11.080	11.634	11.584	10,033	10.249	6 7
8	13.601	13.279	12.052	12.620	12.283	11.043	11.299	11,518	10.872	10.22	8
9	13.247	13.529	12.855	12.276	12.108	11.863	11.263	11,183	10.839	10.23	9
	13.490	13.175		12.239			11.225				_
30	13.430	13,110	12.802	12.480	12'152	11.820	11.482	11'146	10.804	10.460	30
1 2	13.367	13,000	12.746 12.688	12'428	12'104	11.775	11'443	11.000	10.768	10'427	2
3	13.301	12.932	12.627	12.373	12.023	11.428	11,399	11.023	10,230	10.321	3
4	13.1231	12.863	12.262	12.316	11'943	11.625	11,323	10'977	10.648	10,312	4
		_									
35	13.079	12.489	12'493	12,101	11.883	11.269	11'251	10.058	10.603	10'274	35 6
6 7	12,000	12.712	12'421	12,153	11.819	11.210	11,138	10.878	10.222	10,183	7
8	12.816	12.543	12.344	11.021	11.42	11.447	11.076	10.766	10,452	10'134	8
9	12.418	12'450	12'175	11.803	11.604	11,310	11,010	10.704	10,392	10,081	9
		_								10'025	40
40	12.613	12.352	12.082	11.807	11.23	11.534	10.864	10.269	10.334	9.965	1
2	12.203	12 240	11.880	11.41	11.437	11,068	10.784	10,494	10'200	9,901	2
3	12,300	12,050	11.770	11.212	11.248	10.976	10.698	10'415	10,150	9.832	3
4	12,130	11.892	11.652	11,405	11'144	10.879	10.607	10,330	10.046	9.758	4
45		11.763		11.584		10.775	10,210	10'239	9.962	9.679	45
6	11.843	11.624	11.236	11.1204	10.019	10,662	10.406	10 239	9.871	9.292	6
7	11.680	11.476	11.226	11.027	10'791	10'547	10 207	10,039	9.775	9.202	7
8	11.26	11,351	11,108	10.888	10.659	10'423	10.140	9,050	9.672	9.410	8
9	11.324	11.128	10,023	10.740		10,501				9.307	9
50	11'174	10.086	10'790	10.282	10.372	10.12	9'924	9.689	9.447	9,199	50
100	50	10.806	10.618	10,421	10 3/2	10,002	9.785	9.558	9 447	9.084	1
		51	10.438	10,520	10.024	9.850	9.639	9.420	9,194	8.962	2
	61		13	10'071	9.883	9.688	9.485	9.274	9.057	8.832	3
01		60			9.704	9.217	9.323	9.121	8.912	8.696	4
61 60	7.215	7:550				9.339	9°154	8.961	8.760	8.553	55
100	7.385	7.559				9 339	8.977	8.792	8.601	8.402	6
							,,,	8.617	8.434	8.244	7
									8.260	8.079	8
										7.907	9
	61	60	52	52	54	55	56	57	58	59	
	01	00	1 32	53	1 34	1 33	30	31	1 30	37	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

21 PER

										44	
					3	/					
x	60	61	62	63	64	65	66	67	68	69	x
10	10.475	10,100	9.728	9.356	8'988	8.622	8.260	7.903	7.550	7.202	10
1	10.467	10.093	9.721	9.320	8.982	8.617	8.256	7.899	7.546	7'199	1
2	10.459	10.086	9.714	9.344	8.977	8.612	8.251	7.894	7.542	7'196	2
3	10.449	10'077	9.706	9.337	8.970	8.606	8.246	7.890	7.538	7'192	3
4	10'439	10.067	9.697	9.329	8.963	8.600	8.240	7.884	7.533	7.188	4
15	10'427	10'057	9.688	9.320	8.955	8.592	8.233	7.878	7.528	7.183	15
6	10,412	10.042	9.677	9,310	8.946	8.284	8.539	7.872	7.522	7.177	6
7	10,401	10.033	9.666	9,300	8.936	8.575	8.518	7.865	7.515	7.172	7
8	10.386	10,010	9.653	9.288	8.926	8.566	8.209	7.857	7.508	7.165	8
9	10.371	10.002	9.640	9.276	8.915	8.556	8.200	7.848	7.201	7.128	9
20		9.989	9.625	9.263	8.902	8.244	8.190	7.839	7.492	7.120	20
1	10.322				8.889	8.532	8.179	7.829	7.483	7'142	1
2	10,312	9°972 9°954	9.610	9'249	8.875	8.219	8.162	7.818	7 403	7.133	2
3	10,592	9'935	9 593	9.217	8.860	8.206	8.124	7.806	7'462	7'123	3
4	10,543	9.914	9:556	9,199	8.844	8.491	8.141	7.794	7.451	7,113	4
					8.827	8.476	8.122	7.781	_		25
25 6	10.332	9.893	9.537	9,181	8.810	8.459	8.115	7.768	7.440	7.103	8
7	10,522	9.847	9.216	9.162	8.791	8.442	8.096	7.753	7.427	7.091	7
8	10.173	9.822	9°494 9°471	9'142	8.772	8.425	8.080	7.738	7.401	7.067	8
9	10.144	9.796	9'447	9.098	8.751	8.406	8.063	7.723	7.386	7.054	9
	1	1									30
30	10,112	9.768	9'422	9.075	8·730 8·708	8·366 8·366	8.045 8.026	7.706	7.371	7.040	1
2	10.084	9.740	9.395	9.021				7.689	7:356	7.026	2
3	10.021	9.410 9.648	9.368	9.026	8.684 8.660	8:344	8.006 7.086		7:339	6.001	3
4	9.981	9.645	9.339	8.971	8.634	8·322 8·298	7'964	7.652 7.632	7:322	6.979	4
	1		9.308			_			7'304	1	
35	9.942	9.609	9.275	8.941	8.606	8.273	7.941	7.611	7.285	6.962	35
6 7	9.902	9.572	9.241	8.909	8.577	8.246	7'917	7.589	7.265	6'943	6 7
8	9.813	9.532	9.205	8·876 8·840	8.547	8.188	7.891	7:566	7'243	6:924	8
9	9.765	9.491	0.166	8.802	8.214	8.122	7.864	7.241	7.221	6.882	9
		9°445	9°124		8'479			7.515	7.197		
40	9.713	9'397	9.080	8.761	8.442	8.153	7.804	7.486	7.171	6.858	40
1	9.657	9.346	9.033	8.718	8.402	8.086	7.771	7.456	7'143	6.833	1
3	9.597	9,531	8.982	8.671	8.360	8.047	7.735	7'424	7'114	6.806	3
4	9.534	9.535	8·928 8·870	8.568	8.314	8.002	7.696	7.389	7.082	6.778	4
		9,169			-	7.960	7.655	7.351		6.746	
45	9.393	9,105	8.807	8.211	8.212	7.911	7.611	7.310	7'011	6.413	45
6 7	9.315	9.029	8.740	8.449	8.122	7.859	7.563	7:267	6:008	6.677	6
8	9.531	8.869	8.669	8.383	8.094	7.804	7.512	7.220	6.882	6.638	8
9	9.142	8.780	8.210 8.210	8.312	8.028	7.743 7.679	7.457	7.170	6.833	6.221	9
			_		7.958		7'397	7.112			
1	8·945 8·837	8.686	8.422	8.124	7.883	7.610	7'334	7.057	6.780	6.202	50
2	8.723	8.585	8:329	8.068	7.803	7.536	7.266	6.002	6.422	6.450	1 2
3	8.602	8.366	8.124	7.976	7.718	7.457	7.193	6.856		6.394	3
4	8.474	8.246	8.013	7.877	7.626	7.372	7.115	6.779	6°595	6.334	4
		1		7.773	7.529		7.032				
5 5	8.339	8.119	7.893	7.662	7.426	7.187	6.844	6.638	6.449	6.200	55 6
7	8.048	7.985	7.768	7'545	7:317	7.085	6.850	6.218	6:369	6.127	7
8	7.892	7.697	7.636	7.421	7.202	6·978 6·864	6.644	6.420	6.284	5.964	8
9	7.728	7.544	7 497	7.122	6.952	6.745	6.233	6.317	6.098	5.876	9
											-
	60	61	62	63	64	65	66	67	68	69	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

 $2^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

											CENT.
					3	y					
x	70	71	72	73	74	75	76	77	78	79	x
10	6.861	6.526	6.197	5.876	5.263	5.258	4.961	4.673	4'394		10
1	6.858	6.23	6.192	5.874	2.261	5.526	4.960	4.672	4 394	4'124	1
2	6.855	6.20	6.193	5.872	5.22	5.525	4.958	4.671	4'392	4.153	2
3	6.852	6.517	6.190	5.870	5.557	5.523	4.956	4.669	4.391	4.151	3
4	6.848	6.214	6.187	5.867	5.222	5.250	4'955	4.667	4.389	4'120	4
15	6.843	6.210	6.183	5.864	5.252	5.248	4.952	4.665	4.387	4.118	15
8	6.839	6.206	6.180	5.860	5.249	5.245	4.950	4.663	4.382	4.112	6
7	6.833	6.501	6.175	5.857	5.246	5.242	4.947	4.661	4.383	4.112	7
8	6.827	6.496	6.171	5.852	5.542	5.239	4'944	4.658	4.381	4'113	8
9	6.821	6.490	6.164	5.848	5.238	5°235	4.941	4.655	4'378	4.111	9
20	6.814	6.483	6.160	5.842	5.233	5.531	4.937	4.652	4.375	4.108	20
1	6.806	6.477	6.123	5.837	5.28	5'227	4.933	4.648	4.372	4'105	1
2	6.798	6.469	6.147	5.831	5.23	5.222	4'929	4.645	4.369	4'102	2
3	6.789	6.461	6.140	5.825	5.212	5.517	4.924	4.640	4.365	4.099	3
4	6.481	6.453	6.135	2.818	2.211	2,511	4.919	4.636	4.361	4.092	4
25	6.771	6.444	6.124	2.811	5.504	5.202	4.914	4.631	4'357	4.092	25
6	6.760	6.435	6.119	5.803	5.497	2,199	4.908	4.626	4'352	4.088	в
7	6.749	6.425	6.102	5.795	5.490	5,105	4.003	4.621	4.348	4.083	7
8	6.738	6.412	6.097	5.786	5.482	5.186	4.896	4.616	4'343	4.079	8
9	6.726	6.404	6.088	5.778	5.474	5.148	4.890	4.610	4.338	4.074	8
30	6.714	6.393	6.077	5.768	5.466	5'171	4.883	4.604	4.332	4.069	30
1	6.401	6.381	6.067	5.759	5.458	5.163	4.876	4.298	4.327	4.064	1
2	6.687	6.369	6.026	5'749	5.448	2,122	4.869	4.291	4.351	4.029	2
3	6.673	6.356	6.044	5.438	5'439	5.146	4.861	4.284	4.312	4.024	3
4	6.658	6.342	6.035	5.727	5.429	2.138	4.853	4.577	4.308	4.048	4
35	6.643	6.358	6.019	5.412	5,410	5.158	4.845	4.269	4.302	4'042	35
8	6.626	6.313	6.002	5.403	5.408	2,118	4.836	4.261	4.292	4.036	6
7 8	6.609	6.297	2,001	5.691	5.396	2.108	4.827	4.553	4.584	4.029	7
9	6.200	6.563	5.976	5.677	5.384	5.097	4.817	4.544	4.279	4.022	8
	6.270		5.960	5.662	5.371	5.082	4.807	4.232	4.571	4.012	_
40	6.249	6.244	5.943	5.647	5.357	5.073	4.795	4.25	4.262	4'007	40
2	6.226	6.223	5.924	5.630	5.342	5.059	4.783	4.214	4'253	3.999	1
3	6.502	6.177	5.904	5.612	5.326	5.045	4.771	4.203	4.543	3.990	2 3
4	6.448	6.125	5.883 5.860	5.593	5.309	5.030	4.757 4.742	4.491	4.232	3.980 3.980	4
45				5.272	5.500			4.477			
6	6.417	6.092	5.835	5.220	5.270	4.995	4.726	4.463	4.504	3.958	45 6
7	6.349	6.063	5.780	5.26	5.248	4°976 4°955	4.709	4°448 4°431	4'193	3.946	7
8	6.311	6.028	5.748	5°472	5 225	4 955	4.669	4'413	4'162	3.018	8
9	6.540	2.991	5.715	5.442	5.175	4.908	4.647	4.393	4.142	3,003	9
50	6.556	5,021	5.679	5'409	5.143	4.881	4.624	4.372	4.136	3.886	50
1	6.148	2,008	5.639	5 409	5'111	4.852	4.24	4 312	4.102	3.867	1
2	6.154	2.861	5.239	5'335	5.076	4.821	4'570	4 349	4.083	3.848	2
3	6.072	2.811	5.252	5.533	2.039	4.788	4.240	4.297	4.029	3.826	3
4	6.013	5.757	5.203	5.520	4.999	4.752	4.207	4.268	4.033	3.803	4
55	5.950	5.700	5.450	5.505	4.956	4.713	4.473	4.236	4.002	3.778	55
6	5.883	5.638	5'394	2.121	4,010	4.671	4.435	4.503	3.974	3.751	6
7	5.810	5.2	5'334	5.096	4.860	4.626	4.394	4.166	3.942	3.721	7
8	5.734	5.202	5.270	5.038	4.807	4.578	4.321	4.124	3.906	3.690	8
9	5.62	5.427	5.301	4'975	4.750	4.226	4.304	4.082	3.868	3.656	9
	70	71	72	73	74	75	76	77	78	79	
					7 1	13					

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VALUES OF ANNUITIES ON TWO JOINT LIVES

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	y y										
x	80	81	82	83	84	85	86	87	88	89	x
10	3.864	3.613	3'373	3.145	2,021	2.709	2.208	2,314	2,132	1.964	10
1 2	3.863	3.613	3'372	3'141	2.920	2.709	2.208	2.316	2,132	1.063	1 2
3	3.861	3.611	3.371	3.141	2.010	2.708	2.208	2.316	2'135	1.963	3
4	3.860	3.610	3.370	3,139	5.918	2.707	2.207	2,312	2'134	1.963	4
15	3.859	3.609	3.369	3.138	2.018	2.707	2.206	2'315	2'134		15
6	3.857	3.608	3.368	3'137	2.917	2.706	2.206	2'314	2'133	1,962	6
7	3.856	3.606	3.366	3.136	2.016	2.702	2.202	2'314	2'133	1,061	7
8	3.854	3.605	3.362	3.132	2'915	2.704	2.204	2.313	2.135	1.061	8
9	3.852	3.603	3.363	3.134	2'914	2.403	2.203	2'312	2'131	1,060	9
20	3.850	3.601	3.362	3.135	2.912	2.702	2.202	2.311	2,131	1.959	20
1	3.847	3.599	3.360	3.130	2,011	2.401	2.201	2'310	2.130	1.959	1
2	3.845	3.296	3.328	3,150	2.000	2.699	2.200	2.309	2'129	1.958	2
3	3.842	3.294	3.355	3.152	2.907	2.698	2.498	2'308	2,158	1.957	3
4	3.839	3.291	3.323	3.154	2.002	2.696	2.497	2.304	2.152	1.956	4
25	3.835	3.288	3.320	3.155	2.003	2.694	2.495	2.302	2,159	1.955	25
6	3.832	3.282	3.348	3,150	5.901	2.692	2.494	2.304	2'124	1.954	6
7	3.828	3.285	3.345	3.114	2.899	2.690	2.492	2.305	2,153	1.953	7
8	3.824	3.578	3.341	3,114	2.897	2.688	2.490	5,301	2,155	1,025	8
9	3.820	3.574	3.338	3,115	2.894	2.686	2.488	2.599	2'120	1,020	9
30	3.816	3.240	3.332	3,100	2.891	2.684	2.486	2.297	2,110	1.949	30
1	3.811	3.267	3.331	3.102	2.889	5.681	2.484	2.292	2.112	1'948	1
2	3.806	3.263	3.358	3,105	2.886	2.679	2.482	2,594	2.112	1.946	2
3 4	3.802	3.228	3'324	3.099	2.883	2.676	2.479	2,501	2,113	1.944	3
	3.797	3.224	3.320	3.095	2.880	2.674	2.477	2.589	2,115	1.943	4
35	3'791	3.249	3.319	3.092	2.877	2.671	2.475	2.584	2,110	1,941	35
7	3.786	3.244	3,311	3.088	2.873	2.668	2'472	2.282	2.108	1,030	6
8	3.780	3.539	3'307	3.080	2.870	2.661	2'469	2.283	2,100	1,038	8
9	3.767	3.533	3'302	3.022	2.862	2.658	2.463	2.277	2,101	1.034	9
40	3.760				2.858					1'934	
1	3.753	3.21	3.586	3°070 3°064	2.853	2.650 2.650	2.460	2.272	2.000	1'932	40
2	3.745	3.208	3.279	3.060	2.848	2.646	2.457	2'272	2.003	1'929	2
3	3.736	3.200	3.513	3.024	2.843	2.641	2°453 2°449	2.265	2.093	1'927	3
4	3.727	3.492	3.262	3.047	2.838	2.637	2.445	5.561	2.082	1,051	4
45	3.717	3.483	3'258	3.040	2.832	2.631	2'440	2.257	2.083	1,018	45
8	3.706	3'473	3.249	3.033	2.825	2.625	2.435	2.223	2.080	1,012	6
7	3.694	3.463	3.540	3.022	5.818	5.610	2.430	2.548	2.076	1,015	7
8	3.681	3.452	3.530	3.019	2.810	2.613	2.424	2.543	2.041	1,008	8
9	3.668	3.440	3,510	3.007	2.802	2.605	2.417	2.532	2.066	1.903	9
50	3.653	3.426	3.508	2.996	2'793	2.257	2.410	2.531	2.061	1.899	50
1	3.636	3.412	3,192	2.985	2.783	2.289	2.403	2.55	2.022	1.894	1
2	3.619	3.396	3.181	2.973	2.772	2.279	2.394	2.512	2.049	1.888	2
3	3.600	3'379	3.199	2.960	2.761	2.269	2.386	2.510	2.042	1.885	3
4	3.579	3,361	3.120	2.945	2.748	2.228	2.376	2.501	2.032	1.876	4
55	3.557	3'341	3,135	2.930	2.734	2.246	2.365	2,105	2.027	1,869	55
8	3.233	3,350	3.113	2'913	2.419	2.233	2.354	2.185	2,018	1.861	6
7	3.206	3.597	3.093	2.895	2'703	2.219	2.341	2.141	2.008	1.853	7
8	3.478	3.541	3.040	2.875	2.686	2.203	2.328	2,120	1,008	1.844	8
	3.448	3'244	3.046	2.854	2.667	2.487	2,313	2'146	1.987	1.834	9
	80	81	82	83	84	85	86	87	88	89	
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VALUES OF ANNUITIES ON TWO JOINT LIVES

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x		0- 1	00				06		-0	00 1	700		\boldsymbol{x}
	90	91	92	93	94	95	96	97	98	99	100	101	
10	1,800	1.648	1.205	1.369	1'240	1.152	1.013	920	.828	704	552	*324	10
1	1.800	1.648	1,205	1,369	1'240	1,152	1.013	.919	828	'704	552	324	1
3	1.800	1.648	1.202	1,369	1'240	1,152	1,017	.010	·828 ·828	704	552	324	3
4	1.499	1.647	1,205	1.369	1.239	1,152	1,011	.010	828	704	.55 ²	324	4
15	1.799	1.647	1.201	1.369	1,530	1,152	1,011	,010	.828	.704			15
6	1'799	1.647	1,201	1.368	1.539	1.152	1,011	,919	828	704	55 ²	324	6
7	1.798	1.646	1,201	1.368	1,530	1.154	1.011	,010	.828	.704	.221	324	7
8	1.798	1.646	1.200	1.368	1.538	1'124	1,011	.919	.828	.704	.221	324	8
9	1.494	1.646	1,200	1.364	1.538	1.154	1.011	.919	.828	'704	.221	324	9
20	1.797	1.645	1,200	1.364	1.538	1'124	1,010	.918	827	.403	.221	'324	20
1	1.496	1.645	1'499	1,364	1,538	1,153	1,010	918	827	'703	.221	324	1
3	1.795	1.644	1'499	1.366	1.537	1.153	1,010	918	827	703	551	324	2 3
4	1'795	1.643	1.498	1,362	1.532	1,153	1,000	918	827	703	.221	324	4
25	1'793	1.642	1.497	1,362	1,539	1,155	1,000	917	.826	703		324	25
6	1'793	1.641	1'496	1.364	1'235	1'121	1,008	917	826	703	551	324	6
7	1.491	1.640	1'495	1,363	1,532	1,151	1,008	.916	.826	.702	.220	324	7
8	1.490	1.639	1.492	1.363	1.534	1'120	1,008	.916	.826	.702	.220	323	8
8	1.489	1.638	1.494	1.365	1.533	1,150	1.004	.916	.825	.702	.220	323	9
30	1.788	1.637	1.493	1,361	1.533	1,110	1.004	.012	.825	.401	'550	.323	30
1	1.486	1.636	1.492	1.360	1,535	1,110	1,000	915	.825	.401	.220	323	1
2	1.785	1.635	1,491	1,360	1,531	1,118	1,000	914	.824	'701	.220	323	2
3 4	1.784	1.633	1'490	1,320	1,530	1.112	1.002	'914 '913	·824 ·823	701	:549	323	3 4
	1.481			1.328		_			823		549	323	
35	1.779	1.630	1.488	1.357	1,558	1,112	1'004	'913 '912	823	700	*549 *549	'323 '323	35
7	1.778	1.629	1.486	1.322	1.552	1,112	1,003	'912	.822	.699	549	323	7
8	1.776	1.627	1.484	1.324	1.556	1'114	1'002	.911	.822	.699	.548	322	8
9	1.774	1.626	1.483	1.323	1.556	1,113	1,001	911	.821	.698	.248	.322	8
40	1.773	1.624	1.482	1.325	1'224	1,115	1,001	.010	.821	.698	.548	.322	40
1	1.441	1.622	1.480	1.320	1,553	1,111	1,000	.909	.820	.698	'547	*322	1
2	1.768	1.621	1.479	1'349	I.555	1,110	'999	909	.819	'697	547	322	2
3 4	1.766	1.919	1.477	1'347	I'22I	1,108	998	908	.818.	.697	547	322	3 4
	1.761		1.475	1.346		1,108	'997	907	.817	·696	.246	322	45
45	1.758	1.614	1.473	1.344	1.218	1.102	*996	906	816	695	°546	'321	6
7	1.755	1.609	1.469	1.340	1.512	1,104	'993	903	.816	.694	545	321	7
8	1.752	1.606	1.466	1'338	1,513	1,105	992	.903	.815	.694	545	321	8
9	1.748	1.603	1'463	1.336	1,511	1,100	.991	'902	.814	.693	.544	.321	9
50	1.744	1.299	1.460	1,333	1,500	1,000	.989	.000	.812	.692	*544	*320	50
1	1.40		1'457	1,330	1.500	1.097	'987	.899	.811	.691	543	320	1
2	1.735	1.292	1.454	1.327	1,504	1.004	985	.897	.810	.690	542	320	2
3 4	1.730	1.282	1.446	1,324	1,108	1.080	'98 ₃	·895 ·893	·808 ·807	·689	542	319	3 4
55	1.418	1		1.320		1.089		.891	.805	.686	541		55
6	1.719	1.271	1'441	1,312	1,101	1.083	'979 '976	.889	803	.685	539	.318	6
7	1.704	1.262	1'431	1.308	1.184	1,080	970	.887	.801	.683	.238	.318	7
8	1.697	1.228	1.425	1.305	1,185	1.076	970	.884	'799	.682	537	317	8
9	1.688	1.221	1.418	1.297	1.148	1.072	'966	.881	.796	.680	`535	.316	9
	90	91	92	93	94	95	96	97	98	99	100	IOI	
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VALUES OF ANNUITIES ON TWO JOINT LIVES.

Age of	Age of I	Elder Life	Reference to
Younger Life (at side).	(At top).	(At bottom).	page in Tables.
10-19	10-19		224
10-29	20-29	_	225
10-39	30-39		226
10-49	40-49	_	227
10-59	50-59	_	228
10-59	60-69	- .	229
10-59	70-79	_	230
10-59	80-89		231
10-59	90–101	_	232
60-61	_	60-61	228
60-71	_	62-71	227
60-81	_	72-81	226
60-91	_	82-91	225
60-101	_	92-101	224

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VALUES OF ANNUITIES ON TWO JOINT LIVES

	1									_	_
x					3	<i>y</i>					x
1.0	10	II	12	13	14	15	16	17	18	19	
10	21'782	21.684	21.280	21'471	21.356	21'235	21,100	20.976	20.837	20.693	10
	10	21.288	21'487	21,380	21,598	21'149	21.056	20.896	20.760	20.018	1
		11	21.388	21.584	21'174	21.029	20.938		20.678	20.239	2
	IOI	100	12	21,183	21'076	20'963	20'845	20.420	20.290	20'454	3 4
101	.108		99	13	20'972		20'746		20'497	20'364	
100	.139	.198		98	14	20.754	20.642	20.23	20'399	20.268	15 6
99	.121	*221	253		97	15	20.532	20,304	20,186	20,065	7
8	162	*239	277	304		96		17	20'071	19,920	8
7	167	*250	*290	321	339	.382	95		18	19:832	9
5	°175	·263	307	°340	359 387	*412	444	94		19	
			329	*387		438		• • • • • • • • • • • • • • • • • • • •	93		
94	'194 '203	°296	*348 *369	412	'411 '438	430	'473 '505	*505 *540	.578	92	
2	203	327	'388	433	430	494	*534	572	.613	.651	92
1	219	'341	407	°456	488	521	•565	.602	.650	.692	1
90	.226	355	425	.478	.211	547	·594	.637	.685	730	90
89	*233	*368	.443	*499	535	574	.623	.670	721	.770	89
8	240	*380	459	.219	'558	*599	.621	'701	755	.808	8
7	*246	392	475	*538	.280	'623	.679	731	.789	*845	7
8	252	*403	'491	557	.601	.647	.705	761	'822	.881	6
5	257	.414	.202	575	'621	.669	'731	'789	.854	.916	5
84	*262	424	.219	*592	640	.691	755	·816 ·843	.884	'951	84
3 2	·267	433	532	.608 .623	·659 ·676	.712 .731	.778 .801	*868	914	983	3 2
1	275	'441 '450	555	637	693	750	.822	.892	969	1.042	1
80	279	457	.266	.650	.708	767	.842	914	995	1'074	80
79	282	.464	.576	.663	.723	.784	.861	.936	1,010	1'102	79
8	.285	471	.585	675	737	.800	.879	956	1'042	1.138	8
7	·288	477	594	.686	750	.814	·896	'975	1.064	1.125	7
6	.501	.482	.602	.696	.762	.828	'912	993	1.082	1.149	6
5	*294	.487	.609	.706	773	.841	927	1,010	1.104	1,108	5
74	*296	492	.619.	714	.783	.853	940	1'026	1,155	1'218	74
3	*298	497	623	723	'793 '802	·864	953	1.041	1.139	1.538	3
2	300	.201	·629	.73° .738	'811	·875 ·885	'965 '977	1.022	1,122	1.226	2
70	304	.208	639	730	.818	.894	987	1,080	1.184	1.589	70
69	305	.211	.644	750	.826	902	.997	1,001	1.194	1.304	69
8	.306	514	.648	.756	.832	.910	1,009	1'102	1.500	1.317	8
7	.308	'517	652	.761	.839	.917	1'014	1,111	1.550	1.330	7
8	.300	.219	.656	.766	.844	'924	1.022	1.150	1.531	1.342	6
5	.310	.222	.660	.770	.850	.030	1.050	1,150	1.540	1.323	5
64	.311	524	.663	774	.854	.936	1,036	1.136	1.549	1.363	64
3	312	.526	.666	778	·859	941	1'042	1.143	1.257	1,321	3 2
2	°313	528	·668	·782	·863	'946 '950	1.048	1,120	1.262	1,380	1
60	314	531	.673	.788	870	954	1,028	1,191	1.548	1.394	60
	IOI	100	99	98	97	96	95	94	93	92	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

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				-		,					
x					3						x
	20	21	22	23	24	25	26	27	28	29	
10	20'543	20.387	20.222	20.028	19.884	19.706	19.521	19.331	19.136	18.937	10
1	20.471	20.314	20.128	19.993	19.822	19.646	19.464	19.277	19.084	18.886	1
2	20.393	20.243	20.086	19'924	19.756	19.282	19.402	19.518	19'027	18.832	2
3 4	20.312	20'164	10.058	19.850	19.699	19.213	19.337	19.088	18.903	18.774	3 4
	20,552	20'079		19.688		19'364		10.019	18.834	18.646	
15	20.032	19.896	19.842	19.600	19.529	19,304	10,113	18.940	18.760	18.575	15
7	19,935	19.796	19.654	19.207	19,323	19.194	19'029	18.858	18.683	18.201	7
8	19.823	19.691	19.252	19.408	19.258	19,105	18.940	18.773	18.600	18.421	8
9	19.408	19.579	19'444	19'303	19.124	19.004	18.846	18.685	18.213	18.332	9
20	19.288	19.463	19.331	19.193	19.020	18.901	18.746	18.286	18.420	18.247	20
	20	19.340	19,515	19.078	18.938	18.793	18.641	18.485	18.322	18.123	1
	OT	21	19.087	18.830	18.821	18.679	18.232	18.379	18.111	18.054	2
	91	90	22	18.830	18.269	18.560	18.416	18.120	17.998	17.951	3 4
91	736		89		24	18.302	18.160	18.027	17.880	17.727	25
90	.778	.824		88		25	18.037	17.899	17.756	17.606	6
89	.821	.871	'921	T'004	87		26	17.766	17.626	17.481	7
8 7	·863	.961	1,020	1'024	1,132	86		27	17.491	17.350	8
6	944	1,002	1,068	1,130	1,193	1.254	85	84	28	17.214	9
5	983	1'048	1,112	1,185	1,540	1,312	1,381	04	83	29	
84	1'021	1,000	1,191	1'233	1°304	1.375	1.446	1,216		82	
3	1.022	1,131	1,500	1,585	1.328	1.434	1.210	1.282	1.660		
2	1,003	1.140	1.520	1,330	1'410	1'492	1,245	1.623	1.733	1,815	82
1	1.124	1.208	1,501	1.376	1,461	1.244	1,633	1.210	1.805	1,889	1
80	1,120	1'244	1,335	1'421	1,210			1.784		1.962	80
79	1,110	1.311	1'370	1,463	1.228	1.654	1.802	1.846	2'009	5.039	79 8
7	1.544	1,343	1'442	1.244	1.647	1.752	1.828	1,062	2.023	2.181	7
6	1.523	1,372	1.476	1.281	1.688	1.798	1,000	2.055	2.132	2'248	в
5	1,508	1,400	1.202	1,019	1.428	1.842	1.928	2.076	2'194	2.313	5
74	1,355	1.427	1.237	1.620	1.765	1.884	2.004	2'127	2,521	2.375	74
3	1.344	1,422	1.262	1.685	1.801	1.024	2.049	2.176	2*305	2.435	3
2	1,365	1.475	1.202	1'711	1.835	1.002	2,001	2*223	2:357	2,492	2
70	1'402	1'497	1.640	1'740	1.896	2'030	2.198	2.308	2.452	2.546	1 70
69	1.419	1.537	1.665	1.791	1.024	2'062	2°203	2°348	2'496	2.646	69
8	1.435	1.222	1.685	1.814	1,920	2,001	2,539	2'385	2.537	2.692	8
7	1.449	1.242	1.401	1.836	1.975	2'119	2.267	2.420	2.576	2'736	7
6	1.463	1.288	1'719	1.856	1.992	2,142	2.596	2.452	2.613	2.776	6
5	1.476	1,605	1.436	1.875	2,010	5,169	2,353	2,483	2.647	2.812	5
64	1.487	1.615	1.751	1.892	2.039	2,131	2.349	2.211	2.679	2.850	64
3 2	1.498	1.639	1.765	1,008	2.057	2,317	2.372	2.238	2.709	2.884	3
1	1,218	1.620	1,40	1'923	2.090	2,5221	2,394	2°563 2°586	2.737	2°915 2°944	2
60	1.226	1.660	1.802	1.950	2.102	2.566	2°434	2.607	2.787	2'972	60
	91	90	89	88	87	86				82	
	91	90	09	00	0/	30	85	84	83	02	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

3 PER

					3	·/			-		
x	30	31	32	33	34	35	36	37	38	39	x
10	18.731	18.20	18.303	18.085	17.855	17.623	17.384	17.141	16.891	16.635	10
1 2	18.681	18.474	18.513	18.040	17.815	17.584	17:348	17.106	16.823	16.604	1 2
3	18.575	18.371	18.165	17.947	17.726	17'499	17.309	17.029	16.785	16.232	3
4	18.216	18.312	18.108	17.895	17.676	17.452	17.222	16.986	16.744	16.496	4
15	18.453	18.254	18.049	17.839	17.623	17.401	17.174	16.940	16.700	16.454	15
6	18.382	18.180	17.987	17.780	17.566	17.347	17.122	16.890	16.653	16.409	6
8	18.313	18.046	17.850	17.716	17.505	17.289	17.002	16.838	16.220	16.310	7 8
9	18.129	17.969	17.776	17.577	17'441	17.165	16.942	16.722	16,495	16.256	9
20	18.070	17.887	17.697	17.201	17.300	17.092	16.878	16.658	16.432	16.108	20
1	17.979	17.799	17.613	17'421	17.223	17.018	16.808	16.201	16.367	16.134	1
2	17.884	17.708	17.525	17.336	17'142	16.941	16.733	16.20	16.299	16.072	2
3	17.783	17.611	17.432	17.247	17.056	16.859	16.654	16.444	16.227	16.003	3
4	17.678	17.209	17.334	17.123	16.966	16.772	16.271	16.362	16.125	15.931	4
25	17.568	17.403	17.231	17.054	16.871	16.681	16.485	16.585	16.072	15.855	25
6 7	17.451	17.174	17.123	16.842	16.666	16.485	16.393	16,101	15.899	15.442	6 7
8	17'204	17.051	16.893	16.728	16.22	16.379	16.132	16.004	15.807	12.605	8
9	17.071	16.923	16.769	16.608	16.443	16.569	16.089	15.903	15.709	15.209	9
30	16.933	16.790	16.640	16.485	16.322	16.124	15.979	15.796	15.607	15.411	30
	30	16.621	16.209	16.322	16.194	16.033	15.865	15.685	15.200	15.308	1
	81	31	16.362	16.518	16.066	15.907	15.741	15.268	15.388	15.501	2 3
		80	32	16.077	15.786	15.774	15.480	15.445	15'270	15.088	4
81 80	1.972 5.024	2'142	79		34	15.491	15'341	15.185	15.018	14.845	35
79	2'134	2,558	2,351	78	77	35	15.194	15.041	14.882	14.715	6
8	2.315	2,315	2 321	2.208	77	-6	36	14.894	14.740	14.578	7
7	2.588	2.394	2.200	2.603	2'705	76	75	37	14.291	14.435	8
6	2.361	2.474	2.286	2.696	2.805	5,011		74	38	14'284	
5	2.432	2.221	2.669	2.786	2.902	3.012	3.156		73		
74	2.200	2.626	2.750	2.874	2,996	3.119	3.532	3.350	3.283	72	
3 2	2.2628	2.765	2.828	2.039 3.039	3.084	3,310	3°34° 3°442	3°463 3°573	3.701	3.826	72
1	2.688	2.831	2'974	3,114	3.500	3°401	3.241	3.679	3.814	3'947	1
70	2.745	2.893	3.043	3.195	3.341	3.490	3.637	3.782	3.925	4.062	70
69	2.799	2.953	3.108	3.563	3.419	3.574	3.728	3.881	4.031	4.179	69
8	2.849	3.000	3.140	3,331	3'493	3.655	3.816	3.976	4.133	4.389	8
7 6	2.898	3,005	3.528	3°396 3°457	3.2631		3,980	4.067	4.325	4°395 4°496	6
5	2.986	3.100	3.336	3.212	3.695	3.875	4.026	4.536	4.415	4.593	5
64	3.056	3.504	3.386	3.269	3.754	3'941	4.128	4.314	4.200	4.685	64
3	3.063	3.546	3.432	3.620	3.811	4'003	4.196	4.389	4.281	4.773	3
2	3.008	3.582	3.475	3.668	3.864	4.061	4.260	4.459	4.658	4.856	2
60	3,191	3.321	3.216	3.713	3,960	4.118	4'320	4°525 4°587	4°73° 4°798	4°935 5°009	60
-			3.224								
	81	80	79	78	77	76	75	74	73	72	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

					3	/					
x	40	41	42	43	44	45	46	47	48	49	x
10	16:374	16.106	15.833	15.223	15.268	14.976	14.679	14.376	14.068	13.754	10
$\begin{array}{ c c }\hline 1\\ 2\end{array}$	16.314	16.078 16.048	15.248	15.201	15.214	14.930	14.636	14.357	14.030	13.737	1 2
3	16.279	16.019	15'747	15.472	12,105	14'904	14.613	14.313	14.008	13.699	3
4	16.242	15.981	15.714	15'441	15.165	14.876	14.282	14.588	13.982	13.677	4
15	16.505	15.943	15.678	15.407	15.130	14.846	14.557	14.561	13.060	13.653	15
6 7	16.120	15.903	15.640	15.371	12.002	14.814	14.526	14.531	13.003	13.600	6
8	16.062	15.860	15.259	12,335	12,019	14.779	14'493	14.168	13.872	13.221	8
9	16.014	15.764	15.209	15.246	14.978	14.702	14.420	14.135	13.839	13.239	9
20	15.958	15.712	15.458	15.199	14.932	14.659	14.380	14.094	13.803	13.205	20
1	15.000	15.656	15.406	15.149	14.885	14.614	14.337	14.024	13.765	13.469	1
2	15.838	15.597	15.320	15.095	14.834	14.266	14.292	14.011	13.4	13.431	2
3 4	15.773	15.469	15.530	14.080	14.781	14.216	14.244	13.018	13.636	13.348	3 4
25	12.631	15.400	12.165	14.917	14.665	14'406	14'140	13.868	13.288	13,303	25
6	15.224	15.327	15.092	14.851	14'602	14.347	14.084	13.814	13.238	13.526	6
7	15.474	15.520	15.020	14.782	14.537	14.284	14.025	13.758	13.485	13.500	7
8	15.389	15.170	14.943	14.709	14.467	14'219	13.962	13.700	13'430	13.123	8
9	15.300	15.082	14.862	14.632	14.394	14'149	13.897	13.638	13'371	13.098	9
30	15.504	14.996	14.777	14°552 14°467	14.318	14.077	13.828	13.573	13.310	13.040	30
2	12,000	14.804	14.688	14.377	14 23/	14,000	13.679	13.432	13.245	12.919	1 2
3	14.898	14.701	14.496	14.284	14.063	13.835	13.299	13.326	13.102	12.847	3
4	14.785	14.293	14.393	14.182	13.969	13.746	13.212	13.546	13.030	12.776	4
35	14.666	14.479	14.583	14.081	13.870	13.652	13.425	13.191	12.949	12.700	35
6	14.241	14.359	14.169	13.971	13.766	13.223	13,331	13,105	12.865	12.621	6
7 8	14'409	14.100	13.048	13.856	13.656	13'448	13,139	13,008	12.44	12.236	7 8
9	14.159	13.960	13.787	13.606	13.417	13,550	13.012	15.805	12.281	12.325	9
40	13.974	13.814	13.646	13'471	13.588	13.097	12.898	12.690	12.475	12.221	40
	40	13.660	13.498	13'329	13.125	12.967	12.773	12.272	12.362	12.142	1
		41	13.343	13.180	13.000	12.829	12.642	12.447	12.243	12'031	2
	71	70	42	13.023	12.858	12.232	12.324	12.312	12'117	11.482	3 4
71	4.076		69	43	44	12,375	15,504	15.058	11.843	11.621	45
70	4.505	4.336		68		45	12'042	11.873	11.695	11.200	6
69	4.324	4.465	4.603	4.879	67		46	11.410	11.239	11.360	7
8 7	4.441	4.201 4.215	4°737 4°866	2.016	5.165	66	6=	47	11.375	11.503	8
6	4.664	4.829	4.991	5.149	2,303	5.452	65	64	48	11.038	9
5	4.768	4.941	2.111	5.277	5.439	5.597	5.750		63	49	
64	4.868	5.049	5.556	5.400	5.240	5.736	5.897	6.024	_	62	
3	4.963	5.121	5:336	5.218	5.696	5.870	6.040	6:204	6:364	6.679	62
2	2.023	5.341	5.441	5.631	5.817	5°999	6.308	6.350	6.665	6.835	1
60	2,519	5'429	5.636	5.840	6.042	6.540	6.433	6.623	6.807	6.985	60
	71	70	69	68	67	66	65	64	63	62	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

					9	·/					
x	50	51	52	53	54	55	56	57	58	59	x
10	13'436	13,113	12.785	12'454	12'119	11.480	11'439	11,006	10.750	10'404	10
1	13'420	13.008	12.771	12.441	12'107	11.769	11.429	11.086	10.742	10.396	1
3	13.403	13.085	12.757	12.427	12.080	11.757	11,418	11.076	10.732	10.384	3
4	13.363	13.042	12.40	12,412	12.064	11'744	11,302	11.062	10'722	10.378	4
15	13'341	13.024	12.703	12.377	12.047	11.714	11.378	11.030	10.698	10.322	15
6	13.317	13.005	12.682	12.357	12.029	11.697	11.362	11.024	10.684	10.343	6
7	13.501	12.977	12.659	12.336	12.000	11.678	11.342	11,008	10.669	10.350	7
8 9	13.563	12.024	12.608	12,313	11.088	11.628	11,356	10.031	10.628	10'314	8 9
20	13.534	12.894	12.280	12.262	11'964	11.637	11,300	10.972	10.636	10,58	20
1	13.168	12.861	12.220	12.234	11.914	11.289	11.584	10,021	10.2018	10.581	1
2	13,135	12.828	12.219	12.502	11.886	11.264	11.532	10,008	10.246	10'243	2
3	13.094	12.792	12.485	12.173	11.856	11.236	11.511	10.884	10.224	10'222	3
4	13.024	12.754	12.449	12.140	11.825	11.206	11'184	10.829	10.230	10'200	4
25	13'012	12.712	12,412	12'104	11.792	11.476	11.122	10.832	10.202	10,144	25
6 7	12.002	12.628	12,331	12'068	11.757	11,443	11.122	10.803	10'479	10,126	6 7
8	12.871	12.285	12.582	11.987	11.683	11'373	11.000		10'422	10,100	8
9	12.819	12.233	12.545	11.944	11.642	11,332	11'025	10.410	10.395	10.041	9
30	12.764	12.482	12.194	11.899	11.600	11.596	10.088	10.675	10.360	10'041	30
1	12.707	12.428	12'143	11.852	11.226	11.524	10.040	10.639	10.356	10,010	1
3	12.646	12.371	12.089	11.802	11.209	11'211	10.008	10,001	10,501	9'977	2
4	12.283	12.311	11.033	11.49	11.459	11,116	10.865	10.210	10.214	9.906	3 4
35	12.444	12.181	11,011	11.634	11,325	11.064	10.772	10°474	10.143	9.868	35
6	12.369	13,110	11.844	11.22	11.332	11,010	10'721	10.427	10.158	9.827	6
7	12.580	12.035	11.774	11.206	11,535	10'952	10.667	10.377	10.085	9.784	7
8 9	12'205	11.955	11.699	11.436	11,199	10,891	10.600	10.323	10.033	9.738	8
40	12.112	11.871	11.619	11,361	11,006	10.822	10.248	10'266	9.980	9.688	
1	11,018	11.481	11.235	11'282	11,022	10.422	10.483	10.206	9.863	9.636 9.280	40
2	11.813	11.284	11.349	11,102	10.858	10.602	10'340	10'072	9.798	9.520	2
3	11.698	11.477	11.248	11.013	10.768	10.217	10.561	9.998	9.730	9.457	3
4	11.248	11.362	11'140	10.010	10.672	10.427	10.149	6.616	9.656	9.388	4
45	11.420	11.545	11.052	10,801	10.240	10,331	10.086	9.834	9.577	9,312	45
6 7	11.316	10.948	10,004	10.686	10.461	10,550	9,990	9.745	9°493	9,536	6 7
8	11.053	10.835	10.442	10.565	10.346	10,000	9.888	9.649	9'404	9.125	8
8		10.682	10.496	10,500	10.002	9.883	9.664	9.438	9.206	8.968	9
50	10.700	10.226	10'345	10.122	9.959	9.754	9.242	9.323	9.098	8.866	50
	50	10,360	10,189	10.004	9.815	. 9.918	9'413	9.301	8.983	8.758	1
	61	51	10.050	9.845	9.663	9'474	9°277	9.073	8.862	8.644	2 3
07		60		9.679	9°5°4 9°338	9.322	9°133 8'982	8·937 8·794	8.733 8.598	8.395	4
61 60	7.128	7.325			7 333	8.998	8.824	8.643	8.455	8.561	55
	, 150	1 325				2 993	8.658	8.486	8.306	8.110	6
								8.321	8.149	7'971	7
									7.986	7.815	8 9
	6-									7.653	
	61	60	52	53	54	55	56	57	58	59	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

3 PER

					3	/					
x	60	61	62	63	64	65	66	67	68	69	x
10	10.026	9.709	9.361	9.012	8.670	8.327	7.987	7.650	7'317	6.988	10
$\begin{array}{ c c }\hline 1\\ 2 \end{array}$	10'049	9.702	9°356 9°349	9.004	8.660 8.660	8.318	7.983	7.647	7'314	6'985	$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$
3	10'032	9.687	9.341	8.997	8.654	8.315	7'974	7.638	7.306	6.978	3
4	10.053	9.678	9.333	8.989	8.647	8.306	7.968	7.633	7.301	6.974	4
15	10.013	9.668	9.324	8.981	8.639	8.299	7.962	7.627	7.296	6.969	15
6 7	0.000	9.657 9.646	9.314	8.972 8.962	8.631	8·292 8·283	7 ⁹⁵⁵	7.621	7.285	6·964 6·959	6 7
8	9'974	9.633	9.292	8.952	8.612	8.275	7.939	7.607	7.278	6.923	8
9	9.959	9.619	9'279	8.940	8.601	8.265	7.930	7.599	7.270	6.946	9
20	9'943	9.604	9°266	8.927	8.290	8.254	7.921	7.590	7'262	6.939	20
1 2	9.926	9.289	9.521	8.899 8.899	8·578 8·564	8·243 8·231	7.899	7.580	7'253	6.931	$egin{array}{c} 1 \ 2 \end{array}$
3	9.888	9°572 9°554	9.235	8.884	8.220	8.518	7.887	7°57° 7°559	7.244	6.913	3
4	9.868	9.535	9.201	8.868	8.535	8.204	7.874	7.547	7.224	6.903	4
25	9.847	9.212	9.183	8.851	8.20	8.189	7.861	7.535	7'212	6.893	25
6 7	9.824	9°494 9°472	9,164	8.833	8·503 8·485	8·174 8·158	7 ^{.8} 47	7:522	7.188	6.882	6 7
8	9.775	9.448	9,131	8.794	8.467	8.141	7.817	7.509	7.175	6.859	8
9	9.748	9.424	9,099	8.773	8.448	8.153	7.800	7.480	7.162	6.847	9
30	9'721	9.398	9.075	8.751	8.428	8.102	7.783	7.464	7.147	6.834	30
1 2	9.661	9'372	9.050	8.729	8.407	8.086	7.766	7.448	7'133	6.820	1 2
3	9.629	9'343	8.997	8.679	8.361	8.044	7.747	7.431	7.100	6.791	3
4	9.296	9.583	8.968	8.653	8.337	8.022	7.707	7.394	7.083	6.776	4
35	9.260	9.250	8.938	8.625	8.311	7.998	7.686	7.375	7.062	6.759	35
6 7	9.522	9.215	8.906	8.595 8.564	8.284	7.973	7.663	7.354	7.046	6.742	6 7
8	9.440	9,138	8.835	8.230	8.552	7.918	7.613	7.308	7.005	6.704	8
9	9°394	9.096	8.796	8.495	8.192	7.888	7.585	7.583	6.982	6.683	9
40	9'345	9.052	8.755	8.457	8.157	7.856	7.556	7.256	6.958	6.661	40
1 2	9'294	9.004	8.663	8.416	8.119	7.822	7.524	7.197	6.903	6.612	1 2
3	9.179	8.897	8.613	8.325	8.036	7.746	7.455	7.163	6.873	6.284	3
4	9,112	8.838	8.228	8.275	7.990	7.703	7.416	7.138	6.841	6.222	4
45	9.047	8.775	8.200	8.221	7.940	7.657	7'374	7.090	6.806	6.23	45
7	8.974	8.707	8.437	8.101	7.887	7.608	7.329	7.048	6.768	6.488	6 7
8	8.813	8.557	8.298	8.034	7.768	7.499	7.228	6.956	6.684	6.412	8
9	8.724		8.551	7.963		7.438	7.172	6.902	6.637	6.369	9
50	8.629 8.528		8.020	7.886	7.631	7'373	7'112	6.849	6.286	6:322	50
2	8.421		7.957	7.718	7.555	7.303	7°047 6°978	6.790	6.473	6.213	2
3	8.307	8.082	7.857	7.625	7.388	7.148	6.902	6.658	6.411	6.165	3
4	8.184	7.972	7.752	7.26	7.297	7.063	6.826	6.286	6.344	6.100	4
55	8.060	7.853	7.640	7.422	7.199	6.876	6.742	6.508	6.196	5.964	55 6
7	7.786	7.595	7.397	7.195	6.987	6.774	6.228	6.338	6.112	5.889	7
8	7.639	7.455	7.266	7.072	6.871	6.666	6.457	6.244	6.058	2.810	8
9	7.485	7.310	7.139	6'942	6.420	6.223	6.321	6.146	5.937	5.725	9
	60	61	62	63	64	65	66	67	68	69	
					2.	29					

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VALUES OF ANNUITIES ON TWO JOINT LIVES

	VALUES OF ANNOTHER ON TWO SOLKE LIVES OF										OLIVI.
					3	y					
x	70	71	72	73	74	75	76	77	78	79	x
10											7.0
10	6.664	6.345	6.031	5.726	5.426	5'134	4.849 4.847	4°572 4°571	4.303	4°042 4°041	10
2	6.658	6.340	6.058	5.722	5.423	2,131	4.846	4.269	4.301	4.040	2
3	6.655	6.337	6.026	5.720	5.421	5.150	4.844	4.268	4'299	4.039	3
4	6.652	6.334	6.053	5.414	5'419	5'127	4.842	4.266	4.298	4.038	4
15	6.647	6.330	6.019	5.714	5.416	5'124	4.840	4.264	4.296	4.037	15
6	6.643	6.356	6.016	5.411	5.413	5,155	4.838	4.262	4.294	4.035	6
7	6.638	6.322	6.011	5.707	5.409	2,110	4.832	4.260	4.292	4.033	7
8	6.632	6.317	6.007	5.403	5.406	2,119	4.833	4.557	4'290	4.031	8
9	6.626	6.311	6.005	5.699	5.402	5,115	4.829	4.555	4.588	4.059	9
20	6.619	6.302	5.996	5.694	5.398	2,108	4.826	4.221	4.582	4.026	20
1	6.612	6.599	5.991	5.688	5.393	5'104	4.822	4.248	4.282	4.054	1
3	6.604	6.284	5.984	5.683	5.388	5.000	4.818	4.544	4.278	4'021	2
4	6°596 6°587	6.276	5.978	5.676 5.670	5.382	5°094	4.813	4.240	4°275	4.014	3 4
	6.578	6.268	5°97° 5°963.	5.663	5.376			4.236	4'271	4'014	
25 6	6.268	6.259	5 903.	5.656	5°37° 5°363	5.083	4.804	4°532 4°527	4.267	4.011	25 6
7	6.228	6.249	5'946	5.648	5.326	5.071	4 793	4'522	4.228	4'007	7
8	6.247	6.530	5'937	5.640	5°349	5.064	4.787	4.216	4.253	3.998	8
9	6.236	6.229	5.928	5.631	5.341	5.028	4.780	4.211	4.248	3.994	9
30	6.524	6.218	5.918	5.623	5'333	5.020	4.774	4.202	4'243	3.989	30
1	6.213	6.502	5.908	5.613	5.322	5.043	4.767	4.499	4.238	3.984	1
2	6.499	6.196	5.897	5.604	5.316	5.032	4.760	4.492	4.535	3.979	2
3	6.485	6.183	5.886	5.294	5°307	5.027	4.753	4.486	4.556	3'974	3
4	6.471	6.140	5.874	5.283	5.598	2.018	4.745	4.479	4.550	3.969	4
35	6.456	6.124	5.862	5.572	5.588	5.000	4.737	4.472	4.513	3'963	35
6	6.440	6.142	5.849	5.260	5-277	5.000	4.728	4 464	4.502	3'957	6
7	6.424	6.127	5.835	5.248	5.266	4.990	4.719	4.456	4.199	3.950	7
8 9	6°406 6°387	6.094	5.805	5.232	5.254	4°979 4°968	4.710	4.448	4°192 4°184	3.944	8 9
				5.21				4°439		3.936	
40	6°367 6°345	6.076	5.789	5.206	5.558	4.956	4.689	4.429	4.172	3.021	40
2	6.322	6.036	5.771 5.72	5°490 5°473	5.14	4°943 4°929	4.665	4.419	4.126	3,015	2
3	6.297	6.013	5.732	5.455	2.185	4.014	4.652	4.396	4.146	3,003	3
4	6.270	5.989	5.410	5.435	5.162	4.898	4.638	4.383	4.134	3.892	4
45	6.242	5.962	5.686	5.414	5.142	4.881	4.622	4.369	4'122	3.881	45
6	6.510	5.934	5.661	2.391	5.154	4.863	4.606	4°354	4.100	3.870	6
7	6.177	5.904	5.633	5.366	5.103	4.842	4.284	4.338	4.094	3.857	7
8	6.140	5.871	5.604	5'339	5.078	4.821	4.268	4.321	4.079	3.843	8
8	9.101	5.835	5.211	2,310	5.021	4.797	4.547	4.305	4.065	3.828	9
50	6.020	5'797	5.236	5.278	5.053	4.771	4.524	4.581	4.043	3.811	50
1	6.014	5.756	5'499	5°244	4.992	4.744	4.499	4°259	4.023	3.794	1
2 3	5.965	5'711	5.458	5.508	4.959	4.715	4.472	4'235	4.002	3.774	3
4	5.856	5.613	5°415 5°368	5.168	4°924 4°885	4.682 4.647	4.443	4.181	3°979 3°954	3°754 3°731	4
55					4.844		4'412				_
6	5.796	5°557 5°498	5.318	5.080	4.799	4.260	4.378	4.118	3.897 3.897	3.707	55 6
7	5.663	5 4 3 5	5.500	4.078	4 799	4.526	4°342 4°303	4.082	3.865	3.652	7
8	5.280	5.367	5'145	4.022	4.200	4.480	4.361	4.045	3.831	3.622	8
9	2.211	5.296	5.079	4.862	4.646	4.430	4.516	4.004	3.795	3.289	9
	70	71	72	72	74		76	ייר	78	79	
	70	/1	12	73	74	75	/0	77	/6	19	

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VALUES OF ANNUITIES ON TWO JOINT LIVES

80 81 82 83 84 85 86 87 88 10 3.791 3.548 3.314 3.090 2.874 2.668 2.472 2.285 2.108 1 3.790 3.547 3.314 3.089 2.874 2.668 2.472 2.285 2.107 2 3.789 3.546 3.313 3.089 2.873 2.668 2.472 2.284 2.107 3 3.788 3.545 3.312 3.088 2.873 2.667 2.471 2.284 2.107 4 3.787 3.545 3.311 3.087 2.872 2.667 2.471 2.284 2.107 15 3.786 3.543 3.310 3.086 2.871 2.666 2.470 2.283 2.106 6 3.784 3.542 3.309 3.085 2.871 2.666 2.470 2.283 2.106 7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.105 8 3.781 3.539 3.307 3.083 2.869 2.664 2.469 2.282 2.105 9 3.779 3.537 3.305 3.082 2.867 2.662 2.467 2.280 2.104 20 3.777 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.104 20 3.777 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.103 3 3.769 3.529 3.297 3.075 2.861 2.657 2.462 2.277 2.106 4 3.766 3.526 3.295 3.073 2.865 2.659 2.464 2.278 2.101 3 3.766 3.526 3.295 3.073 2.865 2.655 2.460 2.277 2.106 6 3.758 3.513 3.299 3.071 2.858 2.655 2.460 2.277 2.106 6 3.759 3.520 3.290 3.068 2.856 2.655 2.456 2.277 2.106 8 3.758 3.513 3.284 3.063 2.851 2.655 2.458 2.271 2.098 8 3.758 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 9 3.748 3.510 3.281 3.066 2.853 2.656 2.456 2.271 2.098 8 3.758 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 9 3.748 3.510 3.281 3.264 3.063 2.851 2.648 2.454 2.269 2.094													
10 3.791 3.548 3.314 3.090 2.874 2.668 2.472 2.285 2.1068 2.3789 3.546 3.313 3.089 2.873 2.668 2.472 2.284 2.107 2.3788 3.545 3.312 3.088 2.873 2.667 2.471 2.284 2.107 2.3787 3.545 3.311 3.087 2.872 2.667 2.471 2.284 2.107 2.384 2.107 2.384 3.787 3.545 3.311 3.087 2.872 2.667 2.471 2.284 2.107 2.384 2.107 2.384 2.107 3.786 3.543 3.310 3.086 2.871 2.666 2.470 2.283 2.106 3.784 3.542 3.309 3.085 2.871 2.665 2.470 2.283 2.106 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.105 8 3.781 3.539 3.307 3.083 2.869 2.664 2.469 2.282 2.105 8 3.779 3.537 3.305 3.082 2.867 2.662 2.467 2.280 2.104 2.377 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.104 2.377 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.103 3.774 3.533 3.301 3.079 2.865 2.665 2.464 2.278 2.105 3.766 3.526 3.295 3.075 2.861 2.657 2.462 2.277 2.106 2.3763 3.520 3.290 3.068 2.856 2.652 2.458 2.271 2.098 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.271 2.098 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.098 3.752 3.513 3.287 3.066 2.853 2.650 2.456 2.271 2.098 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.454 2.269 2.094 3.752 3.513 3.	80 81 82 82 84 85 86 87 88 80 X												
1 3.790 3.547 3.314 3.089 2.874 2.668 2.472 2.285 2.107 2 3.789 3.546 3.313 3.089 2.873 2.668 2.472 2.284 2.107 3 3.788 3.545 3.312 3.088 2.873 2.667 2.471 2.284 2.107 4 3.787 3.545 3.311 3.087 2.872 2.667 2.471 2.284 2.106 15 3.786 3.543 3.310 3.086 2.871 2.666 2.470 2.283 2.106 6 3.784 3.542 3.309 3.085 2.871 2.665 2.470 2.283 2.106 7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.106 8 3.781 3.539 3.307 3.083 2.869 2.664 2.468 2.281 2.104 9 3.779 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.103	89												
1 3.790 3.547 3.314 3.089 2.874 2.668 2.472 2.285 2.107 2 3.789 3.546 3.313 3.089 2.873 2.668 2.472 2.284 2.107 3 3.788 3.545 3.312 3.088 2.873 2.667 2.471 2.284 2.107 4 3.787 3.545 3.311 3.087 2.872 2.667 2.471 2.284 2.106 15 3.786 3.543 3.310 3.086 2.871 2.666 2.470 2.283 2.106 6 3.784 3.542 3.309 3.085 2.871 2.665 2.470 2.283 2.106 7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.106 8 3.781 3.539 3.307 3.083 2.869 2.664 2.468 2.281 2.104 9 3.777 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.103	1,030	10											
3 3.788 3.545 3.312 3.088 2.873 2.667 2.471 2.284 2.106 4 3.787 3.545 3.311 3.087 2.872 2.667 2.471 2.284 2.106 15 3.786 3.543 3.310 3.086 2.871 2.666 2.470 2.283 2.106 6 3.784 3.542 3.309 3.085 2.871 2.665 2.470 2.283 2.106 7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.106 8 3.781 3.539 3.307 3.083 2.869 2.664 2.468 2.281 2.104 9 3.779 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.104 20 3.777 3.535 3.303 3.079 2.865 2.660 2.465 2.279 2.102 2 3.772 3.531 3.299 3.077 2.863 2.659 2.464 2.278 2.101 <tr< th=""><th>1.039</th><th>1</th></tr<>	1.039	1											
4 3.787 3.545 3.311 3.087 2.872 2.667 2.471 2.284 2.106 15 3.786 3.543 3.310 3.086 2.871 2.666 2.470 2.283 2.106 6 3.784 3.542 3.309 3.085 2.871 2.665 2.470 2.283 2.106 7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.106 8 3.781 3.539 3.307 3.083 2.869 2.664 2.468 2.281 2.104 9 3.779 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.104 20 3.777 3.535 3.303 3.079 2.865 2.660 2.465 2.279 2.102 2 3.772 3.531 3.299 3.077 2.863 2.659 2.464 2.278 2.101 3 3.769 3.526 3.295 3.073 2.860 2.657 2.462 2.277 2.106 <tr< th=""><th>1,030</th><th>2</th></tr<>	1,030	2											
15 3.786 3.543 3.310 3.086 2.871 2.666 2.470 2.283 2.106 6 3.784 3.542 3.309 3.085 2.871 2.665 2.470 2.283 2.106 7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.106 8 3.781 3.539 3.307 3.083 2.869 2.664 2.468 2.281 2.104 9 3.779 3.537 3.303 3.080 2.866 2.661 2.466 2.280 2.104 20 3.777 3.535 3.303 3.079 2.865 2.660 2.465 2.279 2.102 2 3.772 3.531 3.299 3.077 2.863 2.659 2.464 2.278 2.101 3 3.769 3.529 3.297 3.075 2.861 2.657 2.462 2.277 2.100 4 3.766 3.526 3.295 3.073 2.858 2.654 2.461 2.275 2.098 <tr< th=""><th>1.938</th><th>. 3</th></tr<>	1.938	. 3											
6 3.784 3.542 3.309 3.085 2.871 2.665 2.470 2.283 2.106 7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.106 8 3.781 3.539 3.307 3.083 2.869 2.664 2.468 2.281 2.104 9 3.779 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.104 20 3.774 3.533 3.301 3.079 2.865 2.660 2.465 2.279 2.102 2 3.772 3.531 3.299 3.077 2.863 2.659 2.464 2.278 2.101 3 3.769 3.526 3.295 3.073 2.860 2.659 2.464 2.278 2.101 4 3.766 3.526 3.295 3.073 2.860 2.657 2.462 2.277 2.100 25 3.763 3.523 3.290 3.068 2.858 2.654 2.460 2.274 2.098 <tr< th=""><th>1.938</th><th>4</th></tr<>	1.938	4											
7 3.783 3.541 3.308 3.084 2.870 2.664 2.469 2.282 2.105 8 3.781 3.539 3.307 3.083 2.869 2.664 2.468 2.281 2.104 9 3.779 3.537 3.305 3.082 2.867 2.662 2.467 2.280 2.104 20 3.777 3.535 3.303 3.080 2.866 2.661 2.466 2.280 2.102 2 3.772 3.531 3.299 3.077 2.863 2.659 2.464 2.278 2.101 3 3.769 3.529 3.297 3.075 2.861 2.657 2.462 2.277 2.102 4 3.766 3.526 3.295 3.073 2.860 2.657 2.461 2.275 2.099 25 3.763 3.523 3.292 3.071 2.858 2.654 2.460 2.274 2.098 6 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.273 2.097 <tr< th=""><th>1.938</th><th>15</th></tr<>	1.938	15											
8 3781 3:539 3:307 3:083 2:869 2:664 2:468 2:281 2:104 9 3:779 3:537 3:305 3:082 2:867 2:662 2:467 2:280 2:104 20 3:777 3:535 3:303 3:080 2:866 2:661 2:466 2:280 2:103 1 3:774 3:533 3:301 3:079 2:865 2:660 2:465 2:279 2:102 2 3:769 3:521 3:299 3:077 2:863 2:659 2:464 2:278 2:101 3 3:766 3:526 3:295 3:075 2:861 2:657 2:462 2:277 2:100 4 3:763 3:523 3:292 3:071 2:858 2:654 2:461 2:275 2:098 6 3:759 3:520 3:290 3:068 2:858 2:654 2:458 2:273 2:098 7 3:756 3:517 3:287 3:066 2:853 2:650 2:458 2:271 2:095	1.937	6											
9 3'779 3'537 3'305 3'082 2'867 2'662 2'467 2'280 2'104 20 3'777 3'535 3'303 3'080 2'866 2'661 2'466 2'280 2'103 1 3'774 3'533 3'301 3'079 2'865 2'660 2'465 2'279 2'102 2 3'772 3'531 3'299 3'077 2'863 2'659 2'464 2'278 2'101 3 3'769 3'529 3'297 3'075 2'861 2'657 2'462 2'277 2'100 4 3'766 3'526 3'295 3'073 2'860 2'656 2'461 2'275 2'098 25 3'763 3'523 3'290 3'068 2'858 2'654 2'460 2'274 2'098 6 3'759 3'517 3'287 3'066 2'853 2'650 2'458 2'271 2'097 8 3'752 3'513 3'284 3'063 2'851 2'648 2'454 2'269 2'094 <th>1.037</th> <th>7</th>	1.037	7											
20 3'777 3'535 3'303 3'080 2'866 2'661 2'466 2'280 2'103 1 3'774 3'533 3'301 3'079 2'865 2'660 2'465 2'279 2'102 2 3'772 3'531 3'299 3'077 2'863 2'659 2'464 2'278 2'101 3 3'769 3'529 3'297 3'075 2'861 2'657 2'462 2'277 2'100 4 3'766 3'526 3'295 3'073 2'860 2'656 2'461 2'275 2'099 25 3'763 3'523 3'292 3'071 2'858 2'654 2'460 2'274 2'098 6 3'759 3'520 3'290 3'068 2'856 2'652 2'458 2'273 2'097 7 3'756 3'517 3'287 3'066 2'853 2'650 2'456 2'271 2'095 8 3'752 3'513 3'284 3'063 2'851 2'648 2'454 2'269 2'094 <th>1,036</th> <th>8</th>	1,036	8											
1 3.774 3.533 3.301 3.079 2.865 2.660 2.465 2.279 2.102 2 3.772 3.531 3.299 3.077 2.863 2.659 2.464 2.278 2.101 3 3.769 3.529 3.297 3.075 2.861 2.657 2.462 2.277 2.100 4 3.766 3.526 3.295 3.073 2.860 2.656 2.461 2.275 2.099 25 3.763 3.523 3.292 3.071 2.858 2.654 2.460 2.274 2.098 6 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.273 2.097 7 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.095 8 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094													
2 3.772 3.531 3.299 3.077 2.863 2.659 2.464 2.278 2.101 3 3.769 3.529 3.297 3.075 2.861 2.657 2.462 2.277 2.100 4 3.766 3.526 3.295 3.073 2.860 2.656 2.461 2.275 2.099 25 3.763 3.523 3.292 3.071 2.858 2.654 2.460 2.274 2.098 6 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.273 2.097 7 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.095 8 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094	1.032	20											
3 3.769 3.529 3.297 3.075 2.861 2.657 2.462 2.277 2.100 4 3.766 3.526 3.295 3.073 2.860 2.656 2.461 2.275 2.099 25 3.763 3.523 3.292 3.071 2.858 2.654 2.460 2.274 2.098 6 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.273 2.097 7 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.095 8 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094	1'934	1 2											
4 3.766 3.526 3.295 3.073 2.860 2.656 2.461 2.275 2.099 25 3.763 3.523 3.292 3.071 2.858 2.654 2.460 2.274 2.098 6 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.273 2.097 7 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.095 8 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094	1.933	3											
25 3.763 3.523 3.292 3.071 2.858 2.654 2.460 2.274 2.098 6 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.273 2.097 7 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.095 8 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094	1,035	4											
6 3.759 3.520 3.290 3.068 2.856 2.652 2.458 2.273 2.097 7 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.095 8 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094	1.031	25											
7 3.756 3.517 3.287 3.066 2.853 2.650 2.456 2.271 2.095 8 3.752 3.513 3.284 3.063 2.851 2.648 2.454 2.269 2.094	1.030	6											
8 3'752 3'513 3'284 3'063 2'851 2'648 2'454 2'269 2'094	1:929	7											
0 217 0 217 1 217	1'927	8											
9 3.48 3.20 3.510 3.511 3.060 5.840 5.646 5.425 5.568 5.003	1.926	9											
30 3.744 3.206 3.277 3.027 2.846 2.644 2.420 2.266 2.001	1'925	30											
1 3'739 3'502 3'274 3'054 2'843 2'641 2'448 2'264 2'089	1.023	1											
2 3.735 3.498 3.50 3.021 5.841 5.630 5.446 5.565 5.088	1.922	2											
3 3.730 3.494 3.564 3.048 5.838 5.636 5.444 5.560 5.086	1.920	3											
4 3.725 3.490 3.263 3.044 2.835 2.634 2.442 2.258 2.084	1,010	4											
35 3'720 3'485 3'259 3'041 2'831 2'631 2'439 2'256 2'082	1.917	35											
6 3.715 3.480 3.255 3.037 2.828 2.628 2.437 2.254 2.080	1,019	6											
7 3'709 3'475 3'250 3'033 2'825 2'625 2'434 2'252 2'078 8 3'703 3'470 3'245 3'020 2'821 2'622 2'431 2'240 2'076	1.014	7											
3 3 3 47 3 47 3 47 3 47 47 47 47 47 47 47 47 47 47 47 47 47	1,015	8											
3 5 9 7 3 4 5 4 5 5 5 5 5 7 5 6 7 4 5 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	1,010	_											
	1.908	40											
1 3.683 3.452 3.229 3.015 2.809 2.611 2.422 2.241 2.069 2.804 2.607 2.418 2.238 2.066	1,003	2											
3 3.664 3.438 3.514 3.004 5.405 5.605 5.414 5.534 5.063	1,001	3											
4 3.658 3.430 3.510 5.608 5.208 5.208 5.208 5.208 5.208	1.898	4											
45 3.648 3.421 3.505 5.631 5.208 5	1.895	45											
6 3.637 3.415 3.104 5.084 5.481 5.284 5.401 5.555 5.202	1.805	6											
7 3.626 3.402 3.182 2.976 2.774 2.281 2.392 2.218 2.049	1.888	7											
8 3.614 3.391 3.172 2.964 2.764 2.24 2.390 2.213 2.042	1.884	8											
9 3.600 3.379 3.162 5.928 5.429 5.264 5.383 5.504 5.040	1.880	9											
50 3.286 3.369 3.124 5.348 5.250 5.250 5.329 5.329 5.329 5.329	1.876	50											
1 3.240 3.32 3.141 5.034 5.40 5.221 5.360 5.102 5.020	1.871	1											
2 3'553 3'337 3'128 2'925 2'730 2'541 2'361 2'188 2'023	1.865	2											
3 3'534 3'321 3'113 2'912 2'718 2'532 2'352 2'180 2'016 4 3'514 3'303 3'007 2'808 2'706 2'521 2'343 2'172 2'000	1.860	3 4											
334 335 3-77 - 75 - 343 - 343	1.853	_											
55 3'493 3'283 3'080 2'883 2'693 2'509 2'332 2'163 2'001 6 3'469 3'263 3'062 2'867 2'678 2'496 2'321 2'153 1'992	1.846	55											
	1.831	6 7											
7 3'444 3'240 3'042 2'849 2'662 2'482 2'309 2'142 1'983 8 3'416 3'216 3'020 2'830 2'646 2'467 2'295 2'131 1'973	1.822	8											
9 3.384 3.180 5.800 5.800 5.654 5.421 5.585 5.118 1.005	1.812	. 9											
80 81 82 83 84 85 86 87 88	89												

WHOLE-LIFE PARTICIPATING ASSURANCES

MALE LIVES

OM

VALUES OF ANNUITIES OF TWO JOINT LIVES

T							y							
1	x	90	91	92	93	94	95	96	97	98	99	100	IOI	x
1	io	1.779	1.630	1.486	1.352	1,558	1.112	1,003	.013	.822	.699	.548	*323	10
	1	1.779	1.629	1.486	1,322	1,558	1,112	1,003	912	822	.699	548	323	1
н	2 3	1.779	1.629	1.486	1,322	1.552	1,114	1,003	912	·822	.699	548	323	$\frac{2}{3}$
ı	4	1.778	1.629	1.486	1,322	I'227	1.114	1,003	912	822	.699	·548 ·548	322	4
ı.	15	1.778	1.628	1.485	1.322	1.227	1'114	1.003	.011	.822	.699	•548	322	15
Г	6	1.777	1.628	1.485	1.324	1.227	1'114	1,005	,011	.822	.699	548	322	6
Т	7	1.777	1.628	1.485	1.324	1.227	1.114	1.003	.911	.822	.699	.548	.322	7
L	8	1.777	1.627	1.484	1.324	1.556	1.114	1.003	.911	.821	.699	548	322	8
П	8	1.776	1.627	1.484	1,324	1.556	1,113	1.003	.911	.821	.699	.548	.322	9
H	20	1.776	1.627	1.484	1.323	1.556	1,113	1,001	.011	.821	698	:548	322	20
Н	1 2	1.775	1.626	1.483	1,323	1.226	1,113	1,001	,010	·821	·698	·548	322	$\frac{1}{2}$
	3	1.774	1.625	1,482	1,325	1,552	1,113	1,001	910	.821	.698	548	322	3
	4	1.773	1.624	1.481	1,321	1.524	1'112	1,000	.910	.820	.698	.548	.322	4
1	25	1'772	1.623	1.481	1.321	1'224	1,111	1,000	.909	820	.698	547	.322	25
	6	1.411	1.622	1.480	1,320	1.553	I.III	.999	.909	.820	.697	547	.322	8
П	7	1'770	1.622	1.479	1.320	1.553	1,110	999	909	.820	697	547	322	7
П	8	1.768	1.620	1.479	1,348	1,551	1,100	'999 '998	*908 *908	.819	·697	547 547	322	8
	30	1.767	1.610	1.477	1'347	1,551	1,100	.998	.908	.819	.697	547	322	30
П	1	1.765	1.918	1.476	1.347	1,550	1,108	'997	907	.818	.696	546	322	1
н	2	1.764	1.617	1.475	1.346	1.519	1.108	.997	907	.818	.696	.546	.322	2
L	3	1.463	1.615	1.474	1.345	1.510	1.102	.996	.006	.817	.696	.246	321	3
ш	4	1.461	1.614	1.473	1.344	1,518	1,100	.996	.906	.817	.695	.546	.321	4
1	35	1.760	1.613	1.472	1.343	1'217	1,100	'995	.902	.817	695	.546	.321	35
П	8 7	1.759	1.910	1.471	1,345	1,519	1,102	'994	905	.819	.695	.545 .545	.321	6
ı	8	1.755	1.609	1.440	1.341	1'215	1,103	994	*904 *904	.815	.694	545	321	8
Н	Ð	1'754	1.608	1.467	1,339	1.514	1.103	'992	.903	.812	.694	545	.321	9
1	40	1.752	1.606	1.466	1,338	1,513	1.103	'992	'902	. 814	.693	.544	.321	40
1	1	1.420	1.604	1.464	1.334	1,515	1,101	.991	'902	.814	.693	544	321	1
П	2	1.748	1.602	1.463	1,332	1,510	1,100	.990	.901	.813	.692	544	320	2
L	3 4	1.746	1.208	1'461	1.334	1,508	1,008	.088 .088	.900	·812	.691	544	320	3 4
Ш	45	1.741			1,335			.987	*899	.811	.601	543	320	45
	6	1.738	1.296	1.457	1,331	1,502	1.002	.986	·89S	.810	.690	542	.320	6
	7	1.735	1.291	1.423	1.322	1,503	1.004	.985	.897	.809	.689	542	.320	7
	8	1.431	1.288	1'451	1.322	1,301	1,005	'983	.895	.808	.689	541	.319	8
	9	1.458	1 0 0	1.448			1,000	1	.894	.807	.688	.241	.319	9
	50	1.724	1.285	1'445	1.350	1.197	1,080	.080	.893	.806	·687	'540	.318	50 1
	1 2	1.7120	1.578	1.442	1.314	1,102	1.084	'979 '977	.890	·805	.685	539	318	2
	3	1.410	1.24	1.434	1.311	1,180	1.085	975	.888	·S02	.684	.238	.318	3
	4	1.404	1.262	1.430	1.307	1,186	1.079	.972	.886	.801	.683	537	'317	4
	55	1.608	1.260	1.426	1.303	1,183	1.076	.070	.884	799	.682	537	'317	55
	6	1.602	1.224	1'421	1,500	1'179	1.073	967	.882	797	.680	:536	317	6
	7 8	1.685	1.248	1.416	1,589	1.141	1.040	964	·879 ·877	795	·679	535	.316	7 8
	9	1.660	1.241	1'410	1.584	1,199	1.065	958	874	793	.675	533	315	9
-		90	91	92	93			96	97	98	99	100	IOI	
L		90	1 91	1 92	93	94	95	1 90	1 97	90	99	100	101	

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$3\frac{1}{2}$ PER CENT.

VALUES OF ANNUITIES ON TWO JOINT LIVES.

Age of	Age of H	Elder Life	Reference to
Younger Life (at side).	(At top).	(At bottom).	page in Tables.
10-19	10–19		234
10-29	20-29	_	235
10-39	30-39		236
10-49	40-49		237
10-59	50-59	_	238
10-59	60-69		239
10-59	70-79	_	240
10-59	80-89	_	241
10-59	90–101	_	. 242
60–61		60-61	238
60-71		62-71	237
60-81		72-81	236
60-91		82-91	235
60-101		92-101	234

0M

VALUES OF ANNUITIES ON TWO JOINT LIVES.

 $3^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

				_	2	<i>y</i>				_	
x		l		1			1	1	-0		x
	10	II	12	13	14	15	16	17	18	19	
10	19.994	19'914	19.829	19.738	19.643	19.543	19.438	19.327	19,515	19.092	10
	10	19.835	19.752	19.663	19.570	19'472	19.369	19,190	19'147	19.029	1 2
	101	11	12	19.200	19'411	19'317	19'219	19'114	19'005	18.891	3
101	107	100		13	19.324	19.533	19.136	19.034	18.927	18.815	4
100	.138	197	99	98	14	19.143	19.049	18'949	18.844	18.735	15
99	150	'220	.252	90	97	15	18.956	18.859	18.757	18.650	6
8	.191	.238	275	*302		96	16	18.764 17	18.268	18.560	7 8
7	167	*249	289	319	337		95		18	18.366	9
5	175 185	*262 *280	·305	°337	357 385	*37 9	*441	94		19	
94	193	.294	·346	·385	°409	435	*470	.201	93	02	
3	203	.311	340	°409	435	*464	*502	'536	*574	92	
2	210	325	.382	°431	459	°490	.231	•568	.608	.647	92
1	218	339	405	453	*484	•518	.261	.601	.645	.687	1
90	:225	353	'422	474	*508	*544	.590	.633	•680	725	90
89	°232	*366 *378	°440 °456	°496	°531	'570 '594	*619	·665	715 750	.763 .801	89
7	239	370	450	535	576	619	*673	725	783	*838	7
6	'251	.401	.487	°553	597	.642	.700	755	815	.874	6
5	256	*411	*502	°571	. 617	•664	725	.783	.847	.000	5
84	'261	421	*515	.288	·636	•686	. 749	.810	.877	*942	84
3 2	°265	*430	.528	.603 .618	.654 .671	·706 ·726	772	·836	*906	975	3 2
1	270	°439 °447	*540 *551	632	687	720	°794 °815	*884	.934 .961	1.006	1
80	277	454	562	.646	703	.761	.835	*907	986	1.064	80
79	°281	°461	572	.658	717	.778	*854	928	1,010	1.092	79
8	.284	•468	.281	.670	.731	·793	.872	.948	1.033	1'117	8
7 6	287	474	*590	.681	744	.808	*888	·967	1,022	1'142	7
5	°290	479 485	·598 ·605	.691 .400	.756 .767	·822 ·834	'904 '919	1,002	1.075	1,186	6 5
74	'295	*489	.612	.709	7777	·846	1932	1.017	1,115	1,502	74
3	297	494	.619	717	.787	.857	932	1.035	1,150	1,556	3
2	*299	. 498	.624	725	.796	'868	957	1.046	1.142	1.544	2
70	300	*502	.630	732	·804	.877	·968	1.028	1.120	1.500	1
1	302	.202	635	739	'812	·886	979	1.070	1'173	1,524	70
69 8	°304	.208 .211	·640	°745 '750	·819 ·826	.894 .902	*988 *997	1.081	1.186	1.304	69 8
7	306	514	·648	755	.832	902	1.009	1,101	1,508	1,314	7
6	*307	.216	.652	'760	*837	916	1,013	1,110	1,510	1,358	6
5	*309	.213	.655	.764	.843	922	1'020	1,118	1.558	1,330	5
64	310	.21	.658	.768	*848	*928	1'027	1,159	1.237	1.349	64
3 2	,311	523 525	·661	.772 .776	*852 *856	°933	1,038	1,133	1,542	1,359	3 2
1	311	526	.666	170	·860	937	1.043	1,142	1,52	1.372	1
60	.313	.528	.668	782	.863	946	1.048	1,120	1.566	1.385	60
	IOI	100	99	98	97	96	95	94	93	92	
			//	,-	71	,-	75	74	75	,-	

OM

VALUES OF ANNUITIES ON TWO JOINT LIVES.

 $3\frac{1}{2}$ PER CENT.

					3	y					
x	20	21	22	23	24	25	26	27	28	29	x
10 1 2 3	18.966 18.905 18.840	18.835 18.776 18.713 18.647	18.698 18.641 18.581 18.517	18.557 18.502 18.444 18.381	18.411 18.358 18.302 18.241	18.260 18.209 18.154 18.096	18.103 18.054 18.002	17.942 17.895 17.844 17.791	17.776 17.730 17.682	17.605 17.561 17.515 17.465	10 1 2 3
15 6 7	18.698 18.620 18.537 18.450	18.575 18.500 18.420 18.335	18.448 18.374 18.297 18.215	18.315 18.315	18.177 18.109 18.036	18'034 17'898 17'823	17.886 17.823 17.754 17.682	17.733 17.606 17.536	17.575 17.515 17.452 17.385	17'412 17'355 17'294 17'229	15 6 7
8 9 2 0	18.358 18.261 18.159	18.245 18.151 18.051 17.947	18.128 18.036 17.939 17.837	18.005 17.916 17.821 17.723	17.877 17.791 17.699 17.603	17.744 17.660 17.572 17.479	17.606 17.525 17.439 17.348	17.462 17.384 17.301 17.214	17.314 17.238 17.158 17.074	17'161 17'087 17'010 16'928	8 9 20 1
91 90	9I '73° '772	90	17'731 22 89	17.619 17.510 23 88	17.503 17.397 17.286 24	17.380 17.278 17.170 17.058	17.254 17.154 17.049 16.940	17.122 17.025 16.923 16.818	16.985 16.892 16.690	16.842 16.752 16.657	2 3 4 25
89 8 7 6	·814 ·855 ·896 ·936	.863 .908 .953 .996	.013 .028	1,012	1,152	86 1'242	26 85	16.707 16.591 27 84	16°583 16°470 16°352 28	16.453 16.343 16.110	6 7 8 9
5 84 3 2	'974 1'012 1'048 1'083	1.080 1.120 1.030	1,102 1,102	1,141 1,560 1,319	1,344 1,344 1,396	1.302 1.361 1.419 1.476	1,367 1,431 1,494 1,555	1.200 1.268 1.634	1.641	82 1'790	82
1 80 79 8	1'116 1'148 1'178 1'208	1.196 1.232 1.266	1.318 1.318 1.356	1°466 1°448 1°488	1.446 1.494 1.541 1.585	1.531 1.584 1.635 1.684	1.615 1.673 1.729 1.784	1.699 1.763 1.884	1.783 1.852 1.984	1.866 1.941 2.013 2.084	1 80 79 8
7 6 5 74	1,300 1,300	1'329 1'358 1'386	1.427 1.460 1.491	1.224 1.263 1.631	1.628 1.669 1.708	1.432 1.444 1.850 1.861	1.836 1.886 1.934 1.979	1.941 1.996 2.049	2.047 2.102 2.102 2.221	2°152 2°218 2°282 2°342	7 6 5 74
3 2 1 70	1.330 1.321 1.388	1,437 1,460 1,481	1.548 1.574 1.599 1.622	1.662 1.692 1.745	1.780 1.813 1.844	1.900 1.937 1.972	2°023 2°064 2°102	2'147 2'193 2'236 2'277	2°274 2°324 2°372 2°417	2.401 2.456 2.509 2.559	3 2 1 70
69 8 7 6 5	1°404 1°434 1°448 1°460	1.521 1.538 1.555 1.570 1.584	1.643 1.682 1.700 1.716	1.770 1.792 1.814 1.833 1.852	1°900 1°926 1°972 1°972	2°035 2°064 2°117 2°140	2°174 2°206 2°237 2°265 2°292	2°315 2°352 2°386 2°418 2°447	2°460 2°501 2°539 2°574 2°608	2.607 2.652 2.694 2.734 2.771	69 8 7 6 5
84 3 2 1 60	1°472 1°482 1°492 1°501 1°510	1.597 1.610 1.631 1.631	1.731 1.745 1.758 1.770 1.781	1.869 1.882	2°013 2°031 2°048 2°063	2'162 2'183 2'202 2'219 2'236	2.381 2.381 2.381	2°475 2°501 2°526 2°548	2.639 2.668 2.695	2.806 2.839 2.869 2.898 2.924	64 3 2 1 60
	91	90	89	1,056	87	86	2'399	2.269	2.744 83	82	

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VALUES OF ANNUITIES ON TWO JOINT LIVES.

					2	y					
v	30	31	32	33	34	35	36	37	38	39	x
10	17.429	17.248	17.062	16.831	16.675	16.474 16.440	16.266	16.025	15.837	15.285	10
2 3	17'342	17.165	16.983	16.795	16.603	16'404	16.501	15.992	15.777	15.226	2
4	17.243	17.020	16.892	16.753	16.219	16.322	16.15	15.919	15.743	15.24	3 4
15	17.188	16.018	16.841	16.608	16.473	16.535 16.535	16.082	15.835	15.669	15.453	15 6
7	17.068	16.901	16.730	16.252	16.370	16.185	15.988	15.788	15.283	15.371	7
8 9	17.002	16.838	16.603	16.431	16.313	16.020	15.881	15.739	15.235	15.326	8 9
20	16.856	16.698	16.234	16.364	16.189	16,000	15.822	15.630	15.431	15.226	20
1 2	16.778	16.622	16.384	16.530	16.020	15'944	15.460	15.24	15.374	15.114	1 2
3	16.607	16.458	16.303	16.145	15'975	15.803	15.624	15.440	15.250	15.023	3 4
25	16.216	16.369	16.514	16.059	15.812	15.726	15.552	15.370	15.113	14.988	25
6	16.318	16.148	16.035	15.882	15.725	15.262	15.394	15.518	15.037	14.849	6
7 8	16,105	16.076	15.830	15.486	15.633	15'474 15'380	15.308	15.021	14 .95 9	14.774	8
9	15.986	15.857	15.722	15.282	15.436	15.283	15.122	14'961	14.790	14.612	9
30	15.865 30	15.40	15.609	15°472 15°358	12,330	15.022	15'027	14.867	14.699 14.604	14.526	30
	81	31	15°367	15.538	15.104	14.963	14.816	14.664 14.555	14°504 14°400	14°338 14°238	2 3
81	1.948	80	32	33 33	14.856	14.723	14.282	14,441	14.290	14.133	4
80	2.058	2'114	79	78	34	14.296	14.462	14.322	14'175	14.021	35 6
79 8	2,183	2,108	2.289	2.472	77	35	14°332 36	14.065	13'927	13.483	7
7	2.257	2.361	2.464	2.265	2.664	76	75	37	13'794 38	13.654	8 9
6 5	2.329	2°439 2°514	2°548 2°629	2.656 2.743	2°761 2°856	2.865 2.966	3.072	74	73	39	
74	2°465	2.587	2.708	2.829	2.948	3.062	3.180	3.595		72	
3 2	2.528	2.656	2.784	2,000	3.037	3°253	3°282 3°382	3°402 3°508	3.219	3.753	72
1 70	2.648	2°787 2°848	2.927	3.066	3.502	3'342	3.478	3,911	3°743 3°849	3.871 3.985	1 70
69	2.756	2.906	2.993 3.057	3,130	3°284 3°359	3.428	3.570	3.411	3.952	4.092	69
8 7	2.805	2'961	3.112	3.274	3,431	3.288	3°744	3.898	4.021	4'201	8 7
6	2.852	3.001	3°174 3°228	3°337 3°396	3.200	3.663	3.825	3.986 4.040	4°146 4°236	4°303 4°401	6
5 64	2.938	3.104	3.279	3°452	3.626 3.684	3.801	3.976	4.120	4.323	4°494 4°583	5 64
3	3.013 3.013	3,121	3°327 3°372	3°5°5 3°554	3.739	3.865	4.042	4.226	4.483	4.668	3
2 1	3'047	3°229	3°414 3°453	3.645	3.430 3.839	3°981 4°034	4'173 4'231	4.365	4°557 4°626	4°748 4°823	2
60	3.100	3.597	3.490	3.682	3.884	4.084	4.586	4.489	4.692	4.895	60
	81	80	79	78	77	76	75	74	73	72	

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VALUES OF ANNUITIES ON TWO JOINT LIVES.

					3	y					
x	40	41	42	43	44	45	46	47	48	49	x
10	15.384	15.148	14'907	14.660	14.406	14'147	13.881	13.610	13,333	13.021	10
1 2	15.320	15.124	14.883	14.637	14.363	14.152	13.863	13.593	13.317	13,010	1 2
3	12,539	15.068	14.831	14.587	14.338	14.082	13.821	13.253	13.580	13.001	3
4	15.267	15.037	14.801	14.260	14.312	14.028	13.797	13.231	13.259	12.081	4
15	15.531	15.003	14.770	14.23	14.583	14.030	13.771	13.207	13.536	12.960	15
6 7	15.194	14'968	14.735		14.252	14.001	13.744	13'481	13.182	15.039	6 7
8	12.110	14.888	14.660	14'424	14.183	13.036	13.685	13.422	13.129	12.884	8
9	15.064	14.844	14.618	14.385	14.146	13.900	13.648	13.390	13.159	12.856	9
20	15.012	14.797	14.573	14'343	14.102	13.862	13.612	13.356	13.093	12.825	20
1	14'963	14.748	14.256	14.598	14.065	13.851	13.223	13.319	13.029	12.792	1
2	14'908	14.695	14'475	14.250	14'017	13.778	13.232	13.580	13.055	12.757	2
3 4	14.849	14.639	14.422	14.146	13.918	13.733	13.489	13,139	12.083	12.482	3 4
25	14'723	14.219	14.307	14.089	13.865	13.634	13'395	13,120	12.899	12.641	25
6	14.655	14 319	14'245	14.030	13.808	13.280	13'344	13,105	12.853	12.208	6
7	14.283	14.382	14'179	13.968	13.749	13.23	13.500	13.021	12.805	12.252	7
8	14'507	14.313	14'111	13.002	13.686	13°464	13.534	12'998	12.754	12.204	8
9	14.428	14.237	14.038	13.833	13.621	13.401	13.172	12.941	12'701	12.454	9
30	14.342	14.124	13.962	13.761	13.252	13.336	13,113	12.883	12.645	12.401	30
1	14.257	14.073	13.883	13.685	13.480	13.564	13.047	12.755	12.586	12.345	1 2
3	14.166	13.893	13.799	13.604	13.403	13,118	12.906	12.686	12.459	12'287	3
4	13.968	13.796	13.618	13.432	13.538	13.037	12.829	12.613	15.300	13.190	
35	13.861	13.694	13.20	13.338	13'149	12.952	12.748	12.237	12.318	12.001	35
6	13.750	13.287	13°417	13.539	13.022	12.863	12'663	12.455	12'241	12'019	6
8	13.208	13.474	13.309	13.036	12.851	12°768	12.573	12'370	12'160	11.860	8
9	13.348	13.55	13.074	13,020	12'740	12.262	12.376	15.183	11.085	11.774	9
40	13.545	13.098	12.947	12.789	12.624	12,451	12.270	12.081	11.886	11.682	40
	40	12.959	12.814		12.500	12,335	12.157	11.974	11.483	11.282	1
	71	41	12.673	12.25	12,341	12.508	12.038	11.860	11.674	11'481	2
		70	42	12.383	12'233	11.038	11.779	11.40	11.438	11,322	3 4
71 70	3.996		69		44	11,435	11.639	11.478	11,300	11,133	45
	4.114	4.246	41504	68		45	11,491	11.336	11'174	11,003	6
69	4.348	4'37 I 4'492	4.633	4.769	67		46	11.184	11.031	10.866	7
7	4.458	4.609	4.757	4,001	5.041	66	65	47	10.880	10.722	8
6	4.263	4.722	4.877	5.029	5.177	5'320	65	64	48	10.240	9
5	4.663	4.830	4.993	5.125	5.304	5.458	5.605		63	49	
64	4.759	4'933	5.103	5.270	5.433	5.292	5.746	5.895		62	
3 2	4.850	5.031	5.300	5.383	5°554 5°669	5.720	5.885	6.039	6.336	6.490	62
1	4°937 5°019	5'124	5.309	5°491 5°594	5.779	5 960	6.134	6.310	6.477	6.639	1
60	5.097	5.53	5.495	2.691	5.884	6.045	6.527	6.437	6.613	6.481	60
	71	70	69	68	67	66	65	64	63	62	

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VALUES OF ANNUITIES ON TWO JOINT LIVES.

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	y										JENT.
x	50	51	52	53	54	55	56	57	58	59	x
10	12.764	12.471	12.14	11.872	11,266	11.526	10'943	10.626	10.308	9.987	10
1	12'749	12.457	15,191	11.860	11.222	11.546	10'934	10.018	10,300	9.980	1
2	12.734	12.443	12.148	11.847	11.243	11.532	10.923	10.608	10.501	9'972	2
3	12'717	12'427	12,135	11.833	11.230	11.553	10'912	10.208	10.585	9.963	3
4	12.698	12.410	15,119	11.818	11.216	11,510	10,000	10.284	10,511	9'953	4
15	12.677	12,301	12.008	11.803	11,200	11.132	10.884	10.574	10'259	9'942	15
6	12.656	12.370	12.079	11.783	11.483	11.179	10.872	10.260	10'247	9,931	6
8	12.633	12.348	12.028	11.764	11.465	11,105	10.826	10.246	10.533	9.918	7 8
9	12.200	12'324	12.036	11.743	11'446	11'144	10.830	10.230	10,505	9.889	9
20	12.221	12.521	11,086	11.696	11'402	11,103	10.800	10°494	10.182	9.873	20
1	12,250	12.242	11.959	11.670		11.080	10.779	10 494	10,199	9.856	1
2	12.487	13,511	11,030	11.643	11.325	11.026	10'756	10.453	10'147	9.838	2
3	12.452	12.178	11.899	11.614	11.324	11.030	10.732	10.431	10.159	9.818	3
4	12.416	12.143	11.866	11.283	11.596	11.003	10.404	10'407	10'104	9.797	4
25	12.377	12'107	11.832	11.221	11.562	10.975	10.681	10°382	10,080	9.776	25
6	12.336	12.069	11.496	11.217	11.533	10.942	10.652	10.326	10.026	9.753	6
7	12.293	12.028	11.757	11.481	11,100	10,013	10.623	10.328	10,030	9.729	7
8 9	12'248	11.041	11.717	11'444	11'164	10.880	10.20	10.360	10'003	9.704	8
	12°201	11'941	11.675	11'404	11'127	10.842	10.229	10.569	9'974	9.677	-
30	12'151	11.894	11.631	11.365	11.088	10.800	10.489	10'237	9'945	9.649	30
2	12.098	11'792	11.232	11.319	11'047	10'770	10,49	10.168	6.881 6.613	9.590	2
3	11.082	11.737	11°484	11.524	10'958	10.687	10,411	10,131	9.846	9.557	3
4	11'923	11.680	11.429	11.143	10.010	10.642	10.369	10.095	9.809	9.524	4
35	11.858	11.618	11'372	11,110	10.860	10.202	10'325	10.020	9.771	9'488	35
6	11.789	11°553	11,311	11.001	10.806	10.242	10.278	10,000	9.730	9.450	6
7	11.414	11.482	11.546	11,000	10.749	10.491	10'228	9'960	9.687	9.409	7
8	11.640	11.412	11.172	10.936	10.688	10.434	10.142	9.010	9.640	9.367	8
9	11.228	11.332	11,102	10.868	10.624	10.374	10,118	9.857	9.291	9,351	9
40	11.471	11.522	11.027	10.794	10.222	10,310	10.028	9.801	9.239	9.272	40
1	11.379	11.102	10.044	10.416	10,482	10'241	9'994	9.741	9.483	9.220	1 2
3	11.1280	11.072	10.857	10.246	10,404	10,000	9°925 9°852	9°677 9°608	9.423	9'164	3
4	11,066	10.860	10.664	10.42	10,535	10,009	9.774	9.535	9.290	9.040	4
45	10'949	10.757	10.228	10,325	10.138	9,918	9.690	9.457	9.217	8.972	45
6	10.825	10.640	10,446	10,346	10.038	9.823	9.601	9.373	9,139	8.899	6
7	10.695	10.212	10.358	10.133	9,931	9.722	9.206	9°284	9.055	8.821	7
8	10.224	10,383	10.505	10,014	9.818	9.615	9.406	9,189	8.966	8.737	8
9		10°244	10.040	9.888		7 0	9°298	9.088	8.871	8.648	9
50	10.528	10.008	9.930	9.754	9.572	9.382	9.185	8.980	8.770	8.553	50
	50	9.944	9.783	9.614	9.438	9.255	9.064	8.867	8.663	8.452	1
	61	51	9.628	9.467	9°297	9,151 8,380	8.937 8.803	8.746	8.429	8·345 8·232	2 3
		60		9312	8.994	8.831	8.662	8.485	8.305	8.115	4
60	6.795	7.103			7,7	8.676	8.214	8.344	8.168	7.985	55
00	6.945	103				00,0	8.359	8.197	8.038	7.852	6
							00)	8.042	7.880	7'712	7
									7.727	7.566	8
-										7.413	9
	61	60	52	53	54	55	-56	57	58	59	

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VALUES OF ANNUITIES ON TWO JOINT LIVES.

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1 9:658 9:336 9:012 8:689 8:366 8:045 7:725 7:408 7:093 6:782 8 9:643 9:321 8:999 8:677 8:356 8:045 7:716 7:400 7:086 6:775 4 9:634 9:313 8:992 8:670 8:349 8:029 7:711 7:404 7:085 6:778 8:356 8:035 7:716 7:400 7:086 6:775 8:356 8:035 7:716 7:400 7:086 6:775 8:356 8:035 7:716 7:400 7:086 6:775 8:356 8:035 7:716 7:400 7:086 6:775 8:356 8:035 7:716 7:305 7:051 6:771 8:705 8:051 8:025 7:710 7:305 7:051 6:771 8:051 8:051 8:052 8:033 7:705 7:384 7:071 6:762 7:380 9:283 8:964 8:062 8:342 8:023 7:705 7:384 7:071 6:762 7:380 9:288 9:271 8:053 8:054 8:334 8:016 7:699 7:384 7:071 6:762 8:052	x	60	61	62	63	64	65	66	67	68	69	x
2 9651 9329 9:006 8:664 8:361 8:040 7:721 7:404 7:086 6:778 4 9634 9:313 8:999 8:677 8:356 8:035 7:716 7:400 7:086 6:771 15 9:624 9:304 8:983 8:662 8:342 8:023 7:711 7:395 7:081 6:766 6 9:613 9:294 8:974 8:654 8:334 8:016 7:699 7:384 7:071 6:766 7 9:601 9:283 8:964 8:645 8:334 8:016 7:699 7:384 7:071 6:765 8 9:588 9:271 8:953 8:645 8:336 8:088 7:692 7:377 7:055 6:751 9 9:574 9:258 8:941 8:624 8:306 7:990 7:686 7:354 7:044 6:731 1 9:544 9:229 8:915 8:599 8:284 7:990 7:666 7:335 7:036 6:732 2 9:526 9:214 8:900 8:868 8:71 8:258 7:946 7:634 7:335 7:036 6:733 3 9:599 9:197 8:868 8:571 8:258 7:946 7:634 7:335 7:016 6:713 4 9:489 9:179 8:868 8:551 8:540 8:229 7:910 7:610 7:332 7:027 6:704 5 9:448 9:141 8:832 8:523 8:214 7:904 7:596 7:204 6:963 6 9:448 9:141 8:832 8:523 8:214 7:904 7:596 7:204 6:966 9 9:377 9:075 8:771 8:467 8:107 7:839 7:583 7:277 6:974 6:663 9 9:377 9:075 8:710 8:465 8:107 7:839 7:583 7:277 6:974 6:673 8 9:402 9:098 8:703 8:468 8:162 7:857 7:552 7:249 6:946 6:652 9 9:377 9:075 8:710 8:465 8:107 7:839 7:583 7:277 6:974 6:673 1 9:325 9:026 8:702 8:402 8:102 7:882 7:582 7:244 6:94 6:650 9 9:377 9:075 8:710 8:465 8:107 7:839 7:583 7:277 6:994 6:650 9 9:377 9:075 8:710 8:465 8:107 7:839 7:583 7:277 6:994 6:650 9 9:377 9:075 8:710 8:465 8:107 7:839 7:583 7:277 6:994 6:650 9 9:377 9:075 8:710 8:465 8:107 7:839 7:583 7:277 6:994 6:650 9 9:374 9:098 8:793 8:468 8:107 7:839 7:583 7:277 6:994 6:650 9 9:374 8:912 8:465 8:305 8:402 8:402 8:402 8:402 8:				-		8.371					6.784	10
4 9'634 9'313 8'992 8'670 8'349 8'029 7'711 7'395 7'081 6'771 15 9'624 9'304 8'983 8'662 8'342 8'023 7'705 7'389 7'076 6'766 6'766 8'961 9'283 8'964 8'654 8'334 8'016 7'699 7'384 7'071 6'762 7'9601 9'283 8'964 8'645 8'326 8'008 7'692 7'377 7'055 6'757 8 9'5801 9'271 8'953 8'953 8'635 8'317 7'999 7'684 7'370 7'059 6'751 9'9574 9'258 8'941 8'624 8'306 7'990 7'684 7'370 7'059 6'751 9'9574 9'258 8'941 8'624 8'306 7'990 7'684 7'370 7'059 6'751 9'574 9'258 8'941 8'624 8'306 7'990 7'656 7'345 7'036 6'733 2'9526 9'214 8'908 8'586 8'217 7'998 7'666 7'335 7'027 6'744 6'737 1'958 9'574 9'225 8'961 8'908 8'586 8'217 7'958 7'646 7'335 7'027 6'722 3'9599 9'107 8'884 8'571 8'258 7'940 7'634 7'325 7'018 6'713 4 9'489 9'179 8'868 8'556 8'244 7'933 7'622 7'314 7'007 6'704 6'634 8'948 9'141 8'832 8'523 8'214 7'904 7'596 7'290 6'086 6'684 7'9425 9'908 8'793 8'486 8'868 8'857 8'767 7'889 7'583 7'277 6'094 6'662 9'938 8'793 8'486 8'862 8'8162 7'857 7'552 7'249 6'994 6'662 9'9377 9'075 8'771 8'467 8'162 7'857 7'552 7'249 6'994 6'6652 9'9377 9'075 8'771 8'467 8'162 7'857 7'552 7'249 6'949 6'652 9'938 8'793 8'486 8'86 8'863 7'833 7'576 7'235 6'935 6'637 19 3'925 9'020 8'702 8'402 8'802 8'702 8'402 8'802 8'702 8'402 8'802 8'702 8'402 8'802 8'702 8'402 8'802 8'703 8'704 8'		9.651		9.006	8.684	8.361	8.040					2
15						8.356	8.035					3 4
6 9:613 9:294 8:964 8:645 8:334 8:060 7:692 7:377 7:055 6:757 8 9:588 9:211 8:953 8:635 8:377 7:999 7:684 7:370 7:055 6:757 9 9:574 9:258 8:941 8:624 8:306 7:990 7:656 7:352 6:744 20 9:559 9:244 8:928 8:612 8:296 7:980 7:666 7:354 7:044 6:733 2 9;526 9:214 8:900 8:586 8:271 7:958 7:646 7:335 7:027 6:733 2 9;526 9:214 8:900 8:586 8:551 8:258 8:244 7:937 7:656 7:345 7:048 6:713 4 9:489 9:161 8:851 8:540 8:229 7:910 7:616 7:335 7:018 6:713 4 9:449 9:018 8:851 8:540 8:229												15
7 9-601 9-283 8-964 8-645 8-326 8-908 7-692 7-377 7-065 6-757 8 9-588 9-271 8-953 8-635 8-317 7-999 7-684 7-370 7-059 6-751 9 9-574 9-258 8-941 8-624 8-306 7-999 7-675 7-302 7-052 6-744 20 9-559 9-244 8-928 8-612 8-296 7-980 7-666 7-345 7-036 6-735 1 9-544 9-229 8-915 8-599 8-284 7-970 7-656 7-345 7-036 6-735 2 9-526 9-214 8-900 8-586 8-271 7-958 7-646 7-335 7-027 6-722 3 9-590 9-197 8-884 8-571 8-258 7-946 7-634 7-325 7-018 6-713 4 9-489 9-161 8-851 8-546 8-229 7-919 7-610 7-322 6-997 6-694 6 9-448 9-141 8-832 8-523 8-214 7-904 7-596 7-290 6-986 6-684 7 9-425 9-120 8-813 8-556 8-1197 7-889 7-583 7-277 6-974 6-673 8 9-402 9-968 8-793 8-446 8-162 7-857 7-552 7-249 6-946 6-662 9 9-377 9-075 8-771 8-467 8-162 7-857 7-525 7-249 6-949 6-650 3 9-352 9-051 8-749 8-446 8-143 7-839 7-536 7-223 6-935 6-637 1 9-325 9-026 8-726 8-492 8-102 7-802 7-522 7-219 6-926 6-661 3 9-266 8-972 8-676 8-379 8-388 7-761 7-464 7-169 6-652 4 9-234 8-943 8-649 8-354 8-057 7-761 7-422 7-130 6-839 6-550 7 9-129 8-845 8-558 8-270 7-980 7-763 7-745 7-746 6-784 6-784 8 9-047 8-769 8-488 8-205 7-921 7-635 7-349 7-063 6-778 6-494 40 9-001 8-727 8-449 8-169 7-888 7-605 7-339 7-100 6-730 6-730 8 8-868 8-528 8-316 8-046 7-774 7-500 7-225 6-950 6-675 6-494 40 9-001 8-727 8-449 8-169 7-888 7-655 7-321 7-037 6-755 6-473 1 8-953 8-688 8-388 8-809 7-814 7-537 7-260 6-951 6-755 6-473 2 8-901 8-688 8-788 8-799 7-705 7-745 7-745 6-795 6-795 6-795 6-795 3 8-868 8-528 8-316 8-046 7-774 7-750 7-725 6-					8.654	8.334		7.699	7.384			18
9 9:574 9:258 8:941 8:624 8:306 7:990 7:675 7:362 7:052 6:744 20 9:559 9:244 8:928 8:612 8:296 7:980 7:656 7:354 7:044 6:733 2 9:526 9:214 8:960 8:586 8:271 7:958 7:646 7:335 7:027 6:722 3 9:590 9:197 8:884 8:571 8:258 7:946 7:634 7:325 7:018 6:713 4 9:489 9:179 8:884 8:571 8:258 7:946 7:634 7:325 7:018 6:713 4 9:489 9:179 8:884 8:571 8:258 7:946 7:634 7:325 7:018 6:713 5 9:469 9:161 8:851 8:540 8:229 7:919 7:610 7:302 6:997 6:694 6 9:448 9:141 8:832 8:523 8:214 7:904 7:596 7:290 6:986 6:684 7 9:425 9:120 8:813 8:505 8:197 7:889 7:583 7:277 6:974 6:652 9 9:377 9:075 8:771 8:467 8:162 7:857 7:552 7:249 6:949 6:650 9 9:377 9:075 8:749 8:446 8:143 7:839 7:536 7:235 6:935 6:637 1 9:325 9:026 8:726 8:425 8:123 7:821 7:520 7:219 6:921 6:652 2 9:296 9:000 8:702 8:402 8:102 7:802 7:502 7:219 6:921 6:652 2 9:296 9:000 8:702 8:402 8:102 7:802 7:502 7:219 6:921 6:652 3 9:201 8:912 8:676 8:379 8:080 7:782 7:484 7:186 6:891 6:597 4 9:234 8:943 8:649 8:354 8:057 7:761 7:464 7:169 6:874 6:552 8 9:66 8:879 8:590 8:300 8:007 7:782 7:484 7:186 6:891 6:552 7 9:129 8:845 8:558 8:270 7:980 7:690 7:399 7:109 6:820 6:552 8 9:089 8:868 8:544 8:239 7:951 7:653 7:347 7:067 6:806 6:552 8 9:087 8:769 8:488 8:239 7:951 7:653 7:349 7:063 6:778 6:494 40 9:091 8:727 8:449 8:169 7:888 7:695 7:321 7:037 6:755 6:400 4 8:786 8:752 8:468 8:131 7:852 7:572 7:291 7:010 6:730 6:451 8 8:593 8:264 8:020 7:772 7:521 7:267 7:011 6:753 6:495 6:236 9 8:420 8:186 7:947 7:755 7:429 7:066 6:956 6:556			9.583	8.964	8.645	8.326			7.377	1		7
20					8.624	8.306						9
1 9'544 9'229 8'915 8'599 8'284 7'970 7'656 7'345 7'036 6'730 2 9'520 9'119 8'868 8'256 8'241 7'958 7'646 7'335 7'027 6'722 8'9509 9'197 8'884 8'571 8'258 7'946 7'634 7'325 7'018 6'713 4 9'489 9'179 8'868 8'556 8'244 7'933 7'622 7'314 7'007 6'704 8'956 9'469 9'161 8'851 8'540 8'229 7'919 7'610 7'302 6'997 6'604 8 9'448 9'141 8'832 8'523 8'214 7'904 7'596 7'290 6'986 6'684 7'9142 9'098 8'793 8'486 8'180 7'873 7'568 7'274 6'673 8 9'402 9'098 8'793 8'486 8'180 7'873 7'568 7'244 6'961 6'662 9 9'377 9'075 8'771 8'467 8'162 7'857 7'552 7'249 6'949 6'659 8'0935 9'051 8'749 8'446 8'143 7'839 7'556 7'235 6'935 6'635 19 9'325 9'051 8'749 8'446 8'143 7'839 7'556 7'235 6'935 6'635 19 9'325 9'051 8'749 8'446 8'143 7'839 7'552 7'249 6'949 6'659 19 9'327 9'056 8'726 8'425 8'102 7'802 7'502 7'203 6'906 6'611 3 9'266 8'972 8'676 8'379 8'080 7'782 7'484 7'186 6'891 6'597 4 9'234 8'943 8'049 8'354 8'057 7'761 7'464 7'169 6'874 6'532 8'9201 8'912 8'621 8'327 8'033 7'761 7'464 7'169 6'874 6'582 8'9201 8'912 8'621 8'327 8'033 7'761 7'464 7'169 6'874 6'582 8'9089 8'808 8'524 8'239 7'951 7'663 7'339 7'109 6'820 6'514 9 9'047 8'769 8'488 8'225 7'921 7'635 7'349 7'109 6'820 6'514 9 9'047 8'769 8'488 8'229 7'951 7'663 7'335 7'087 6'630 6'514 9 9'047 8'769 8'488 8'229 7'951 7'663 7'321 7'037 6'755 6'451 8'929 8'408 8'109 8'808 8'524 8'239 7'951 7'663 7'331 7'037 6'755 6'443 8'953 8'682 8'408 8'131 7'852 7'572 7'291 7'010 6'730 6'451 8'991 8'648 8'363 8'090 7'814 7'537 7'225 6'950 6'675 6'400 4'876 8'793 8'488 8'205 7'791 7'653 7'321 7'037 6'755 6'490 4'876 8'876 8'587 8'264 7'999 7'730 7'460 6'841 6'575 6'390 9'848 8'858 8'356 8'048 7'747 7'750 6'722 7'221 7'053 6'958 6'040 6'450 6'195 6'341 6'793 8'494 8'108 8'108 8'794 7'705 7'459 7'209 6'958 6'704 6'450 6'195 6'341 6'733 8'848 8'250 7'794 7'705 7'459 7'209 6'958 6'704 6'450 6'195 6'533 8'492 8'186 7'947 7'705 7'459 7'209 6'958 6'704 6'450 6'195 6'533 8'209 7'406 7'404 7'195 6'984 6'679 6'550 6'328 6'103 5'998 8'402 8'186 7'947 7'755 7'259 7'209 6'958 6'704 6'450 6'195 6'533 8'209 7'8	1		1									20
3 9:509 9:197 8:884 8:551 8:258 7:946 7:634 7:325 7:018 6:713 4 9:489 9:179 8:868 8:556 8:244 7:933 7:622 7:314 7:007 6:704 25 9:469 9:161 8:831 8:540 8:229 7:919 7:610 7:302 6:997 6:694 6 9:448 9:141 8:832 8:523 8:214 7:904 7:568 7:277 6:974 6:693 8 9:402 9:098 8:793 8:486 8:180 7:873 7:568 7:249 6:949 6:662 9 9:377 9:075 8:771 8:467 8:160 7:857 7:552 7:249 6:949 6:662 9 9:352 9:051 8:746 8:145 8:123 7:802 7:252 7:236 6:935 6:637 1 9:326 8:792 8:462 8:123 7:821 7:522	1				8.599	8.284	7.970	7.656	7.345		6.730	1
4 9:489 9:179 8:868 8:556 8:244 7:933 7:622 7:314 7:007 6:704 25 9:469 9:161 8:851 8:540 8:229 7:919 7:610 7:302 6:996 6:684 7 9:425 9:120 8:813 8:525 8:197 7:889 7:583 7:277 6:974 6:662 9 9:377 9:075 8:771 8:467 8:162 7:857 7:552 7:249 6:949 6:659 30 9:352 9:026 8:726 8:425 8:123 7:839 7:536 7:235 6:936 6:659 30 9:352 9:026 8:726 8:425 8:123 7:821 7:522 7:235 6:936 6:631 3 9:266 8:972 8:676 8:379 8:080 7:782 7:484 7:186 6:891 6:597 4 9:234 8:943 8:649 8:327 8:337 7:367					8.286							2
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6 9:448 9:141 8:832 8:523 8:214 7:904 7:596 7:290 6:986 6:684 7 9:425 9:120 8:813 8:505 8:197 7:889 7:583 7:277 6:974 6:662 9 9:377 9:075 8:771 8:467 8:162 7:857 7:552 7:249 6:949 6:650 30 9:352 9:026 8:726 8:425 8:123 7:821 7:520 7:219 6:921 6:625 2 9:296 9:000 8:726 8:425 8:123 7:821 7:520 7:219 6:921 6:625 2 9:296 9:000 8:726 8:425 8:123 7:821 7:520 7:219 6:921 6:625 2 9:296 9:000 8:728 8:625 8:102 7:802 7:352 7:235 6:931 6:597 4 9:218 8:621 8:327 8:033 7:782 7:444	25			8.851								25
8 9:402 9:098 8:793 8:486 8:180 7:873 7:568 7:264 6:961 6:662 9 9:377 9:075 8:771 8:467 8:162 7:857 7:552 7:249 6:949 6:652 30 9:352 9:051 8:749 8:446 8:143 7:839 7:536 7:235 6:935 6:637 1 9:352 9:026 8:726 8:445 8:123 7:821 7:520 7:213 6:935 6:637 2 9:266 8:972 8:676 8:379 8:080 7:782 7:484 7:186 6:891 6:597 4 9:234 8:943 8:649 8:354 8:057 7:761 7:464 7:150 6:874 6:582 35 9:201 8:912 8:621 8:327 8:033 7:715 7:422 7:130 6:839 6:550 7 9:129 8:845 8:558 8:270 7:980 7:690		9.448		8.832	8.523	8.214	7.904	7.596				6
9 9:377 9:075 8:771 8:467 8:162 7:857 7:552 7:249 6:949 6:650 30 9:352 9:051 8:749 8:446 8:143 7:839 7:536 7:235 6:935 6:637 1 9:325 9:026 8:726 8:425 8:123 7:821 7:520 7:219 6:921 6:625 2 9:296 9:000 8:702 8:402 8:102 7:802 7:502 7:203 6:906 6:611 3 9:266 8:972 8:676 8:379 8:080 7:782 7:484 7:186 6:891 6:597 4 9:234 8:943 8:649 8:354 8:057 7:761 7:464 7:169 6:874 6:582 35 9:201 8:912 8:621 8:327 8:033 7:738 7:444 7:150 6:857 6:566 6 9:166 8:879 8:590 8:300 8:007 7:715 7:422 7:130 6:839 6:550 7 9:129 8:845 8:558 8:270 7:980 7:690 7:399 7:109 6:820 6:532 8 9:089 8:808 8:524 8:239 7:951 7:635 7:349 7:063 6:778 6:494 40 9:001 8:727 8:449 8:169 7:888 7:605 7:321 7:037 6:755 6:473 1 8:953 8:682 8:488 8:131 7:852 7:572 7:291 7:010 6:730 6:451 2 8:901 8:634 8:363 8:090 7:814 7:537 7:260 6:981 6:703 6:426 4 8:786 8:527 8:264 7:999 7:730 7:460 7:188 6:916 6:644 6:372 45 8:722 8:468 8:210 7:948 7:684 7:417 7:149 6:880 6:611 6:342 8 8:531 8:264 8:020 7:772 7:521 7:201 7:010 6:730 6:426 8 8:533 8:03 7:870 7:633 7:331 7:060 6:799 6:536 6:274 8 8:533 8:033 7:870 7:633 7:332 7:060 6:799 6:536 6:274 8 8:236 8:014 7:787 7:556 7:320 7:082 6:960 6:402 6:151 1 8:236 8:014 7:787 7:556 7:320 7:082 6:960 6:402 6:151 1 8:236 8:014 7:787 7:556 7:320 7:082 6:400 6:471 6:336 6:998 4 7:916 7:714 7:506 7:293 7:076 6:855 6:630 6:402 6:171 5:939 55 7:796 7:601 7:401 7:195 6:984 6:691 6:575 6:361 6:375 6:106 5:953 5:738 8 7:399 7:226 7:047 6:863 6:673 6:478 6:479 6:077 5:871 5:662					8.486	8.180						7 8
30 9:352 9:051 8:749 8:446 8:143 7:839 7:536 7:235 6:935 6:637 1	1			8.771			7.857					9
2 9'296 9'000 8'702 8'402 8'102 7'802 7'502 7'203 6'906 6'611 3 9'266 8'972 8'676 8'379 8'080 7'782 7'484 7'186 6'891 6'597 4 9'234 8'943 8'649 8'354 8'057 7'761 7'464 7'169 6'874 6'582 35 9'201 8'912 8'621 8'327 8'033 7'738 7'444 7'150 6'857 6'566 6 9'166 8'7912 8'848 8'528 8'270 7'980 7'690 7'399 7'109 6'820 6'532 7 9'129 8'848 8'528 8'239 7'951 7'663 7'375 7'087 6'800 6'514 9 9'047 8'769 8'488 8'229 7'951 7'635 7'321 7'037 6'755 6'473 1 8'953 8'682 8'488 8'131 7'852	30		9.021	8.749		8.143	7.839	7.536			6.637	30
3 9:266 8:972 8:676 8:379 8:080 7:782 7:484 7:186 6:891 6:597 4 9:234 8:943 8:649 8:354 8:057 7:761 7:464 7:169 6:874 6:582 35 9:201 8:912 8:621 8:327 8:033 7:738 7:444 7:150 6:857 6:566 6 9:166 8:879 8:590 8:300 8:007 7:715 7:422 7:130 6:839 6:550 7 9:129 8:845 8:558 8:270 7:980 7:690 7:399 7:109 6:820 6:532 8 9:089 8:888 8:524 8:239 7:951 7:663 7:375 7:063 6:778 6:800 6:514 9 9:047 8:769 8:488 8:239 7:921 7:633 7:375 7:063 6:778 6:494 40 9:001 8:727 8:449 8:169 7:888				8.726	8.425	8.153						1
4 9:234 8:943 8:649 8:354 8:057 7:761 7:464 7:169 6:874 6:582 35 9:201 8:912 8:621 8:327 8:033 7:738 7:444 7:150 6:857 6:566 6 9:166 8:879 8:590 8:300 8:007 7:715 7:422 7:130 6:839 6:550 7 9:129 8:845 8:558 8:270 7:980 7:690 7:399 7:109 6:820 6:532 8 9:089 8:868 8:524 8:239 7:951 7:663 7:375 7:087 6:800 6:514 9 9:047 8:769 8:488 8:205 7:921 7:635 7:349 7:063 6:778 6:494 40 9:001 8:727 8:449 8:169 7:888 7:605 7:321 7:037 6:755 6:473 1 8:953 8:634 8:363 8:090 7:814 7:500					8.370					6.801		3
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7 9:129 8:845 8:558 8:270 7:980 7:690 7:399 7:109 6:820 6:532 8 9:089 8:808 8:524 8:239 7:951 7:663 7:375 7:087 6:800 6:514 9 9:047 8:769 8:488 8:205 7:921 7:635 7:349 7:063 6:778 6:494 40 9:001 8:727 8:449 8:169 7:888 7:605 7:321 7:037 6:755 6:473 1 8:953 8:682 8:408 8:131 7:852 7:572 7:291 7:010 6:730 6:451 2 8:901 8:634 8:363 8:090 7:814 7:537 7:260 6:981 6:703 6:426 3 8:468 8:522 8:264 7:999 7:730 7:460 7:188 6:916 6:644 6:372 45 8:722 8:468 8:210 7:948 7:633 7:371					8.327	8.033		7.444		6.857		35
8 9.089 8.808 8.524 8.239 7.951 7.663 7.375 7.087 6.800 6.514 9 9.047 8.769 8.488 8.205 7.921 7.635 7.349 7.063 6.778 6.494 40 9.001 8.727 8.449 8.169 7.888 7.605 7.321 7.037 6.755 6.473 1 8.953 8.682 8.408 8.131 7.852 7.572 7.291 7.010 6.730 6.426 2 8.901 8.634 8.363 8.090 7.814 7.537 7.260 6.981 6.703 6.426 3 8.846 8.582 8.316 8.046 7.774 7.500 7.225 6.950 6.675 6.400 4 8.786 8.527 8.264 7.999 7.730 7.460 7.188 6.916 6.644 6.372 45 8.722 8.468 8.210 7.948 7.684 7.417		-	8.845	8.290	8.300			-	_			6
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1 8·953 8·682 8·408 8·131 7·852 7·572 7·291 7·010 6·730 6·451 2 8·901 8·634 8·363 8·990 7·814 7·537 7·260 6·981 6·703 6·426 3 8·846 8·582 8·316 8·946 7·774 7·500 7·225 6·950 6·675 6·400 4 8·786 8·527 8·264 7·999 7·730 7·460 7·188 6·916 6·644 6·372 45 8·722 8·468 8·210 7·948 7·684 7·417 7·149 6·880 6·611 6·342 6 8·654 8·405 8·151 7·893 7·633 7·371 7·106 6·841 6·575 6·309 7 8·581 8·336 8·088 7·835 7·579 7·321 7·060 6·799 6·536 6·274 8 8·503 8·264 8·020 7·772 7·521 7·267	9		8.769	8.488	8.202	7.921	7.635		7.063		6.494	9
2 8·901 8·634 8·363 8·900 7·814 7·537 7·260 6·981 6·703 6·426 3 8·846 8·582 8·316 8·046 7·774 7·500 7·225 6·950 6·675 6·400 4 8·786 8·527 8·264 7·999 7·730 7·460 7·188 6·916 6·644 6·372 45 8·722 8·468 8·210 7·948 7·684 7·417 7·149 6·880 6·611 6·342 6 8·654 8·405 8·151 7·893 7·633 7·371 7·106 6·841 6·575 6·309 7 8·581 8·336 8·088 7·835 7·579 7·321 7·060 6·799 6·536 6·274 8 8·503 8·264 8·020 7·772 7·521 7·267 7·011 6·753 6·495 6·236 9 8·420 8·186 7·947 7·705 7·459 7·209						7.888				6.755	6.473	40
3 8.846 8.582 8.316 8.046 7.774 7.500 7.225 6.950 6.675 6.400 4 8.786 8.527 8.264 7.999 7.730 7.460 7.188 6.916 6.644 6.372 45 8.722 8.468 8.210 7.948 7.684 7.417 7.149 6.880 6.611 6.342 6 8.654 8.405 8.151 7.893 7.633 7.371 7.106 6.841 6.575 6.309 7 8.581 8.336 8.088 7.835 7.579 7.321 7.060 6.799 6.536 6.274 8 8.503 8.264 8.020 7.772 7.521 7.267 7.011 6.753 6.495 6.236 9 8.420 8.186 7.947 7.705 7.459 7.209 6.958 6.704 6.450 6.195 1 8.236 8.014 7.787 7.556 7.320 7.082		8.001			8.000	7.852						1 2
45 8·722 8·468 8·210 7·948 7·684 7·417 7·149 6·880 6·611 6·342 6 8·654 8·405 8·151 7·893 7·633 7·371 7·106 6·841 6·575 6·309 7 8·581 8·336 8·088 7·835 7·579 7·321 7·060 6·799 6·536 6·274 8 8·503 8·264 8·020 7·772 7·521 7·267 7·011 6·753 6·495 6·236 9 8·420 8·186 7·947 7·705 7·459 7·209 6·958 6·704 6·450 6·195 50 8·331 8·103 7·870 7·556 7·320 7·082 6·840 6·596 6·350 6·104 2 8·135 7·920 7·699 7·474 7·244 7·011 6·774 6·536 6·295 6·053 3 8·029 7·820 7·606 7·386 7·163 6·935		8.846	8.285	8.316			7.200		6.920	6.675	6.400	3
6 8.654 8.405 8.151 7.893 7.633 7.371 7.106 6.841 6.575 6.309 7 8.581 8.336 8.088 7.835 7.579 7.321 7.060 6.799 6.536 6.274 8 8.503 8.264 8.020 7.772 7.521 7.267 7.011 6.753 6.495 6.236 9 8.420 8.186 7.947 7.705 7.459 7.209 6.958 6.704 6.450 6.195 50 8.331 8.103 7.870 7.633 7.392 7.148 6.901 6.652 6.402 6.151 1 8.236 8.014 7.787 7.556 7.320 7.082 6.840 6.596 6.350 6.104 2 8.135 7.920 7.609 7.474 7.244 7.011 6.774 6.536 6.295 6.053 3 8.029 7.820 7.606 7.386 7.163 6.935	4						7.460	7.188				4
7 8·581 8·336 8·088 7·835 7·579 7·321 7·060 6·799 6·536 6·274 8 8·503 8·264 8·020 7·772 7·521 7·267 7·011 6·753 6·495 6·236 9 8·420 8·186 7·947 7·705 7·459 7·209 6·958 6·704 6·450 6·195 50 8·331 8·103 7·870 7·556 7·320 7·082 6·840 6·596 6·350 6·104 2 8·135 7·920 7·699 7·474 7·244 7·011 6·774 6·536 6·295 6·053 3 8·029 7·820 7·606 7·386 7·163 6·935 6·704 6·471 6·236 5·998 4 7·916 7·714 7·506 7·293 7·076 6·855 6·630 6·402 6·171 5·939 55 7·796 7·601 7·401 7·195 6·984 6·769												45
8 8.503 8.264 8.020 7.772 7.521 7.267 7.011 6.753 6.495 6.236 9 8.420 8.186 7.947 7.705 7.459 7.209 6.958 6.704 6.450 6.195 50 8.331 8.103 7.870 7.633 7.392 7.148 6.901 6.652 6.402 6.151 1 8.236 8.014 7.787 7.556 7.320 7.082 6.840 6.596 6.350 6.104 2 8.135 7.920 7.609 7.474 7.244 7.011 6.774 6.536 6.295 6.053 3 8.029 7.820 7.606 7.386 7.163 6.935 6.704 6.471 6.236 5.998 4 7.916 7.601 7.401 7.195 6.984 6.769 6.550 6.328 6.103 5.877 6 7.671 7.483 7.289 7.090 6.886 6.677		8.281										6 7
50 8·331 8·103 7·870 7·633 7·392 7·148 6·901 6·652 6·402 6·151 1 8·236 8·014 7·787 7·556 7·320 7·082 6·840 6·596 6·350 6·104 2 8·135 7·920 7·699 7·474 7·244 7·011 6·774 6·536 6·295 6·053 3 8·029 7·820 7·606 7·386 7·163 6·935 6·704 6·471 6·236 5·998 4 7·916 7·601 7·401 7·195 6·984 6·769 6·550 6·328 6·103 5·877 6 7·671 7·483 7·289 7·090 6·886 6·677 6·465 6·249 6·031 5·810 7 7·538 7·358 7·171 6·979 6·782 6·581 6·375 6·166 5·953 5·738 8 7·399 7·226 7·047 6·863 6·673 6·478		8.503	8.264	8.020	7.772	7.221	7.267		6.753	6.492	6.536	8
1 8·236 8·014 7·787 7·556 7·320 7·082 6·840 6·596 6·350 6·104 2 8·135 7·920 7·699 7·474 7·244 7·011 6·774 6·536 6·295 6·053 3 8·029 7·820 7·606 7·386 7·163 6·935 6·704 6·471 6·236 5·998 4 7·916 7·601 7·401 7·195 6·984 6·769 6·550 6·328 6·103 5·877 6 7·671 7·483 7·289 7·090 6·886 6·677 6·465 6·249 6·031 5·810 7 7·538 7·358 7·171 6·979 6·782 6·581 6·375 6·166 5·953 5·738 8 7·399 7·226 7·047 6·863 6·673 6·478 6·279 6·077 5·871 5·662												9
2 8·135 7·920 7·699 7·474 7·244 7·011 6·774 6·536 6·295 6·053 3 8·029 7·820 7·606 7·386 7·163 6·935 6·704 6·471 6·236 5·998 4 7·916 7·714 7·506 7·293 7·076 6·855 6·630 6·402 6·171 5·939 55 7·796 7·601 7·401 7·195 6·984 6·769 6·550 6·328 6·103 5·810 6 7·671 7·483 7·289 7·090 6·886 6·677 6·465 6·249 6·031 5·810 7 7·538 7·358 7·171 6·979 6·782 6·581 6·375 6·166 5·953 5·738 8 7·399 7·226 7·047 6·863 6·673 6·478 6·279 6·077 5·871 5·662		8.331						6.840	6.206			50 1
3 8.029 7.820 7.606 7.386 7.163 6.935 6.704 6.471 6.236 5.998 4 7.916 7.714 7.506 7.293 7.076 6.855 6.630 6.402 6.171 5.939 55 7.796 7.601 7.401 7.195 6.984 6.769 6.550 6.328 6.103 5.810 7 7.538 7.358 7.171 6.979 6.782 6.581 6.375 6.166 5.953 5.738 8 7.399 7.226 7.047 6.863 6.673 6.478 6.279 6.077 5.871 5.662	2	8.132	7.920	7.699	7.474				6.236	6.295	6.023	2
65 7.796 7.601 7.401 7.195 6.984 6.769 6.550 6.328 6.103 5.877 6 7.671 7.483 7.289 7.090 6.886 6.677 6.465 6.249 6.031 5.810 7 7.538 7.358 7.171 6.979 6.782 6.581 6.375 6.166 5.953 5.738 8 7.399 7.226 7.047 6.863 6.673 6.478 6.279 6.077 5.871 5.662		8.029	7.820	7.606					6.471			3
6 7.671 7.483 7.289 7.090 6.886 6.677 6.465 6.249 6.031 5.810 7 7.538 7.358 7.171 6.979 6.782 6.581 6.375 6.166 5.953 5.738 8 7.399 7.226 7.047 6.863 6.673 6.478 6.279 6.077 5.871 5.662												55
7 7.538 7.358 7.171 6.979 6.782 6.581 6.375 6.166 5.953 5.738 8 7.399 7.226 7.047 6.863 6.673 6.478 6.279 6.077 5.871 5.662												6
	7	7.538	7.358	7.171	6.979	6.782	6.281	6.375	6.199	5'953	5.738	7
												8 9
60 61 62 63 64 65 66 67 68 69												

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VALUES OF ANNUITIES ON TWO JOINT LIVES.

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					3	/					
x		PT	70	72	. 74	75	76	77	78	79	x
	70	71	72	73	74	75	70		70		
10	6.477	6.143	5.875	5.285	5°295	5.012	4.741	4'474	4.512	3.963	10
1	6.474	6.141	5.873	5.281	5'294	5.013	4.740	4.473	4'214	3.962	1
2	6.471	6.169	5.871	5.279	5.292	5.013	4.738	4.472	4.513	3.961	2 3
3	6.468	6.166	5.868	5.24	5.290	2.010	4.737	4.470	4,310	3.960	4
4	6.465	6,163	5.866	5°574	5.588	5.008	4.735	4.469	4'210	3.959	
15	6.461	6.120	5.863	5'571	5.582	5.006	4.733	4.467	4.508	3.958	15
6	6.456	6.122	5.859	5.268	5.583	5.003	4'731	4.465	4°207	3.956	6
7	6.452	6.121	5.855	5.264	5.579	5,001	4.728	4.463	4.502	3.954	7
8	6.446	6'146	5.851	5°560	5.276	4'997	4.725	4.460	4.303	3.952	8
9	6.440	6.141	5.846	5.226	5.272	4°994	4.722	4.458	4°200	3.020	
20	6.434	6.132	5.841	5.221	5.568	4.990	4.419	4.455	4.197	3'948	20
1	6.427	6.150	5.835	5.246	5.563	4.986	4.712	4.451	4°194	3'945	1
2	6.420	6'122	5.829	5.241	5.228	4.982	4.411	4.448	4,188	3.942	2 3
3	6.412	6'115	5.823	5.235	5°253	4.977	4'707	4.444	4.184	3.039	4
4	6.404	6.104	5.816	5.29	5°247	4.972	4.702	4'440		3'936	•
25	6.392	6.099	5.808	5.255	5.541	4.966	4.697	4'435	4.180	3.932	25
6	6.382	6.001	5.800	5.212	5.532	4.960	4.692	4.431	4.176	3.929	6 7
8	6.376	6.082	5.792	5.202	5.558	4°954	4.681	4.421	4.14.164	3.921	8
9	6:365	6.073	5.784	5.200	5.551	4°948 4°941	4.675	4.412	4.165	3.019	9
	6.355	6.063	5.775	5.492	5'214						
30	6.343	6.02	5.765	5.483	5.506	4.934	4.669 4.662	4.410	4.124	3.012	30
1	6.331	6.042	5.756	5.474	5.108	4'927	4.655	4.404	4°152 4°146	3.902	2
3	6.319	6.030	5.745	5.465	2,181	4°920 4°912	4.648	4.391	4'141	3.897	3
4	6:306	6.000	5.735	5°455 5°445	5.175	4.903	4.641	4.382	4.132	3.892	4
	6.293		5.724				4.633	4.378	4.158	3.886	35
35	6.278	5'993	5.712	5.435	5.165	4.895 4.886	4.625	4.370	4'122	3.880	6
6 7	6.263	5'979	5°700 5°686	5°423 5°412	5.12	4.876	4.616	4°362	4,112	3.874	7
8	6.531	5.965	5.673	5'399	5,130	4.866	4.607	4.354	4.108	3.868	8
9	6.513	5'934	5.658	5.386	2,118	4.855	4.598	4.346	4.100	3.861	9
			5.642		_	4.844	4.284	4.336	4.092	3.853	40
40	6.143	5.898	5.625	5°371 5°356	5.102	4.831	4.576	4.326	4.083	3'845	1
1 2	6.121	5.878	5.607	5'340	5.077	4.818	4.564	4.316	4.073	3.837	2
3	6.131	5.856	5.288	5.322	2.001	4.804	4.221	4.304	4.063	3.828	3
4	6.103	5.833	5.264	5.303	5.044	4.788	4.538	4.292	4.052	3.818	4
45	6.074	5.808	5.244	5.583	5.026	4.772	4.523	4.279	4.040	3.807	45
6	6.044	5.481	5.20	2.561	2.002	4.754	4.207	4.264	4.027	3.796	6
7	6.013	5.752	5'493	5.537	4.984	4°735	4.489	4.249	4.013	3.784	7
8	5.978	5.720	5.465	5'211	4.961	4.714	4.470	4.535	3.998	3.770	8
9	5.940	5.686	5.434	_	4.935	4.691	4.450	4.514	3.982	3.755	9
50	5.900	5.650	5.400	5.123	4.908	4.666	4.428	4'194	3.964	3.740	50
1	5.857	5.610	5.365	2,151	4.879	4.640	4.404	4.172	3.945	3.722	1
2	5.810	5.268	5.326	5.082	4.847	4.611	4.378	4.149	3'924	3.704	2
3	5.760	5.22	5.284	5'047	4.813	4.280	4.320	4'124	3.902	3.684	3
4	5.406	5.473	5.239	5.007	4.776	4.246	4.350	4.097	3.877	3.662	4
55	5.649	5.420	5,101	4.963	4.736	4.211	4.288	4.067	3.851	3.638	55
6	5.287	5.364	5.140	4.916	4.693	4.472	4.252	4.036	3.823	3.613	6
7	2.251	5.303	5.084	4.865	4.647	4.430	4.512	4.003	3.792	3.282	7
8	5.451	5.538	5.025	4811	4.298	4.382	4.174	3.962	3.759	3.256	8
9	5.376	5.140	4.962	4.753	4.545	4.337	4°131	3.926	3.723	3.24	9
	70	71	72	73	74	75	76	77	78	79	
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VALUES OF ANNUITIES ON TWO JOINT LIVES.

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Record R						i	/					
10 3720 3484 37257 37039 27829 27629 27437 27254 27080 17915 1 3719 3483 37255 37039 27829 27628 27437 27254 27080 17915 3 3717 3482 37255 37037 27828 27627 27436 27253 27080 17915 4 3716 37480 37254 37036 27827 27626 27436 27253 27097 17914 5 3715 37480 37254 37036 27827 27626 27436 27253 27079 17914 6 3713 37479 37253 37035 27826 27626 27434 27252 27078 17914 7 3712 37477 37251 37034 27825 27625 27434 27252 27078 17913 8 3710 37466 37259 37033 27824 27624 27433 27250 27077 17912 20 3706 37472 37247 37030 27823 27623 27432 27250 27077 17912 2 3701 37468 37243 37028 27820 27612 27429 27244 27074 17910 2 3 37693 37460 37243 37028 27817 27618 27429 27244 27074 17910 3 37693 37450 37234 37038 27817 27618 27426 27425 27245 27071 17907 4 3762 3745 37243 37038 27817 27618 27426 27425 27245 27071 17907 5 3768 3745 37234 37018 27817 27618 27426 27425 27245 27071 17907 6 37686 37454 37231 37016 27809 27618 27426 27425 27247 27074 17907 7 37686 37454 37228 37013 27809 27618 27426 27425 27247 27074 17907 8 37686 37454 37228 37013 27807 27609 27420 27239 27070 17908 8 37687 37440 3728 37008 27807 27609 27420 27339 27067 17904 9 37678 37440 37248 37008 27807 27604 27416 27235 27061 17907 1 37690 3740 37418 37095 27791 27607 27410 27230 27607 17908 3 37661 37423 37204 27992 27788 27992 27410 27230 27250 27350 27350 27250 27350 27250 27350 27250 27350 27250 27350 27250 27350 27250 27350 27250 27350 27350 27250 27350 27350 27350 27350 27350 27360 27365 27365 27365 27365	x	80	81	82	83			86	87	88	89	x
1 3719 3483 3'256 3'038 2'829 2'628 2'437 2'254 2'080 1'915 3 3718 3'483 3'256 3'038 2'829 2'628 2'437 2'254 2'080 1'915 4 3716 3'481 3'255 3'037 2'828 2'627 2'436 2'253 2'080 1'915 5 3715 3'480 3'255 3'037 2'827 2'626 2'436 2'253 2'079 1'914 6 3713 3'479 3'251 3'036 2'827 2'626 2'434 2'252 2'078 1'914 7 3712 3'477 3'251 3'034 2'825 2'625 2'434 2'252 2'078 1'914 8 3710 3'476 3'259 3'033 2'824 2'624 2'433 2'250 2'077 1'912 9 3'708 3'474 3'249 3'032 2'823 2'623 2'434 2'251 2'078 1'913 1 3'704 3'470 3'245 3'028 2'820 2'621 2'439 2'247 2'076 1'911 1 3'704 3'470 3'245 3'028 2'820 2'621 2'439 2'247 2'074 1'910 2 3 3'699 3'468 3'243 3'028 2'820 2'612 2'429 2'247 2'074 1'910 3 3'699 3'463 3'239 3'033 2'815 2'616 2'426 2'245 2'073 1'908 25 3'692 3'460 3'236 3'018 2'810 2'616 2'426 2'245 2'077 1'968 26 3'368 3'451 3'228 3'018 2'807 2'616 2'426 2'245 2'077 1'968 8 3'682 3'451 3'228 3'018 2'807 2'616 2'426 2'245 2'070 1'968 8 3'682 3'441 3'222 3'088 2'807 2'616 2'425 2'242 2'070 1'968 8 3'686 3'446 3'218 3'008 2'807 2'600 2'420 2'239 2'070 1'964 8 3'686 3'446 3'218 3'008 2'807 2'600 2'420 2'239 2'070 1'968 8 3'686 3'444 3'125 3'008 2'807 2'600 2'420 2'239 2'070 1'968 8 3'686 3'446 3'418 3'005 2'799 2'600 2'420 2'239 2'070 1'964 9 3'678 3'440 3'188 3'005 2'799 2'600 2'420 2'239 2'070 1'968 8 3'668 3'448 3'208 2'975 2'791 2'595 2'407 2'235 2'064 1'961 1 3'670 3'440 3'148 3'005 2'796 2'600 2'420 2'235 2'064 1'961 2 3'666 3'436 3'149 3'199 2'988 2'791 2'595 2'407	10	3.720	3°484	3.257		2.829		2°437	2.254	2.080	1,012	10
3 3717 3'.482 3'.255 3'.037 2'8.28 2'627 2'436 2'.253 2'.080 1'.915 4 3'.716 3'.481 3'.255 3'.037 2'8.27 2'626 2'436 2'.253 2'.079 1'.914 5 3'.715 3'.480 3'.254 3'.036 2'8.27 2'.626 2'4.35 2'.252 2'.078 1'.914 6 3'.713 3'.477 3'.251 3'.034 2'8.25 2'.626 2'4.34 2'.252 2'.078 1'.914 7 3'.712 3'.477 3'.251 3'.034 2'8.25 2'.626 2'4.34 2'.252 2'.078 1'.914 8 3'.710 3'.476 3'.259 3'.033 2'8.24 2'.624 2'.434 2'.251 2'.078 1'.913 9 3'.708 3'.474 3'.249 3'.032 2'8.22 2'.622 2'.431 2'.249 2'.076 1'.911 1 3'.704 3'.470 3'.245 3'.038 2'8.22 2'.621 2'.430 2'.248 2'.075 1'.911 2 3'.701 3'.466 3'.241 3'.025 2'.817 2'.616 2'.428 2'.246 2'.074 1'.910 3 3'.699 3'.466 3'.241 3'.025 2'.817 2'.616 2'.426 2'.245 2'.074 1'.910 3 3'.699 3'.460 3'.236 3'.021 2'.813 2'.616 2'.426 2'.245 2'.074 1'.910 4 3'.696 3'.453 3'.234 3'.035 2'.811 2'.616 2'.426 2'.245 2'.074 1'.910 5 3 3'.693 3'.457 3'.234 3'.018 2'.811 2'.613 2'.423 2'.242 2'.077 1'.966 8 3'.686 3'.451 3'.228 3'.013 2'.807 2'.610 2'.420 2'.242 2'.077 1'.966 8 3'.686 3'.447 3'.225 3'.018 2'.804 2'.607 2'.418 2'.237 2'.066 1'.903 8 3'.693 3'.447 3'.225 3'.008 2'.804 2'.607 2'.418 2'.237 2'.066 1'.903 9 3'.676 3'.440 3'.218 3'.005 2'.799 2'.600 2'.410 2'.235 2'.064 1'.901 1 3'.670 3'.440 3'.218 3'.005 2'.799 2'.600 2'.414 2'.234 2'.054 1'.901 1 3'.670 3'.440 3'.218 3'.005 2'.799 2'.600 2'.414 2'.234 2'.054 1'.901 2 3'.666 3'.428 3'.208 2'.995 2'.794 2'.595 2'.407 2'.228 2'.056 1'.808 3 3'.651 3'.423 3'.204 2'.995 2'.794 2'.595 2'.407 2'.228 2'.056 1'.808 3 3'.651 3'.423 3'.204		3.419	3.483		0 0,					1	1	1 2
4 3716 33481 3255 3037 22827 2627 2436 2253 2079 17914 15 3715 33480 3254 3036 2287 2266 2435 2252 2079 17914 6 37713 3477 3253 3034 22825 2262 2434 2251 2078 17914 7 3712 3477 3251 3034 22825 2625 2434 2251 2078 17914 8 3710 3476 3250 3033 22824 2624 2433 2255 2077 17912 8 3776 3476 3255 3033 22824 2624 2434 2255 2077 17912 9 3708 3474 3249 3030 2282 2622 2431 2249 2076 17911 1 3704 3470 3245 3028 22820 2621 2430 2248 2075 17911 2 3701 3468 3243 3027 22810 2616 2426 2245 2077 17902 3 3699 3466 3243 3023 22815 2616 2426 2245 2077 17908 4 3666 3463 3233 3023 22815 2616 2426 2245 2077 17908 5 3683 3457 3234 3018 2280 2611 2421 2242 2070 17904 7 3686 3454 3231 3016 22809 2611 2421 2242 2068 17905 8 3682 3454 3223 3008 2280 2604 2416 2235 2067 17904 9 3668 3447 3225 3001 22809 2611 2421 2240 2068 17905 9 3668 3444 3222 3008 2280 2604 2416 2235 2064 17901 1 3670 3440 3218 3005 2799 2600 2441 2232 2067 17904 2 3666 3436 3215 3000 2798 2794 2597 2410 2230 2059 1807 3 3 361 3423 3211 2999 2794 2597 2410 2230 2059 1807 1808			3.482							_	, , ,	3
6 3 '713 3 '479 3 '253 3 '035 2 '826 2 '626 2 '334 2 '252 2 '078 1 '914 7 3 '712 3 '477 3 '255 3 '034 2 '825 2 '625 2 '434 2 '255 2 '078 1 '913 8 3 '710 3 '474 3 '249 3 '032 2 '823 2 '622 2 '431 2 '250 2 '077 1 '913 20 3 '706 3 '472 3 '245 3 '038 2 '820 2 '622 2 '431 2 '249 2 '076 1 '911 2 3 '706 3 '466 3 '243 3 '025 2 '817 2 '618 2 '429 2 '247 2 '075 1 '911 3 3 '669 3 '466 3 '234 3 '018 2 '811 2 '618 2 '428 2 '244 2 '072 1 '906 4 3 '669 3 '466 3 '234 3 '018 2 '811 2 '618 2 '425 2 '244 2 '072 1 '906 5 3 '629 3 '460 3 '233 <th></th> <th></th> <th>3.481</th> <th></th> <th></th> <th></th> <th>-</th> <th></th> <th></th> <th>2'079</th> <th>_</th> <th>4</th>			3.481				-			2'079	_	4
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4 3.656 3.428 3.208 2.995 2.791 2.595 2.407 2.228 2.058 1.895 35 3.651 3.423 3.204 2.992 2.788 2.592 2.405 2.226 2.056 1.894 6 3.646 3.419 3.199 2.988 2.784 2.589 2.402 2.224 2.054 1.892 7 3.640 3.414 3.195 2.984 2.771 2.586 2.400 2.221 2.052 1.890 8 3.635 3.409 3.191 2.980 2.777 2.580 2.397 2.219 2.050 1.889 9 3.628 3.403 3.186 2.976 2.774 2.580 2.394 2.216 2.047 1.887 40 3.622 3.397 3.181 2.971 2.760 2.576 2.391 2.214 2.045 1.886 2 3.607 3.385 3.163 2.961 2.765 2.568 2.384 2.208 2.040 1.880 3.591 3.370 3.1												3
6 3.646 3.419 3.199 2.988 2.784 2.589 2.402 2.224 2.054 1.892 7 3.640 3.414 3.195 2.984 2.781 2.586 2.400 2.221 2.052 1.890 8 3.635 3.409 3.191 2.980 2.777 2.583 2.397 2.219 2.050 1.889 9 3.628 3.403 3.186 2.976 2.774 2.580 2.394 2.216 2.047 1.889 40 3.622 3.397 3.181 2.971 2.770 2.576 2.391 2.214 2.045 1.885 1 3.615 3.391 3.175 2.966 2.765 2.572 2.388 2.211 2.043 1.882 2 3.607 3.385 3.169 2.961 2.761 2.568 2.384 2.208 2.040 1.880 3 3.591 3.370 3.156 2.950 2.751 2.554 2.380 2.204 2.037 1.878 4 3.51 3.361 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>02</th> <th></th> <th>4</th>										02		4
7 3.640 3.414 3.195 2.984 2.781 2.586 2.400 2.221 2.052 1.890 8 3.635 3.409 3.191 2.980 2.777 2.583 2.397 2.219 2.050 1.889 9 3.628 3.403 3.186 2.976 2.774 2.580 2.394 2.216 2.047 1.887 40 3.622 3.397 3.181 2.971 2.770 2.576 2.391 2.214 2.045 1.885 1 3.615 3.391 3.175 2.966 2.765 2.572 2.388 2.211 2.043 1.882 2 3.607 3.385 3.169 2.961 2.761 2.568 2.384 2.208 2.040 1.880 3 3.599 3.377 3.163 2.956 2.756 2.564 2.380 2.204 2.037 1.878 4 3.591 3.341 2.936 2.745 2.554 2.372 2.197 2.030 1.872 45 3.581 3.361 3.141 </th <th>35</th> <th></th> <th></th> <th>3.204</th> <th>2.992</th> <th>2.788</th> <th></th> <th>2°405</th> <th>2.226</th> <th>2.056</th> <th></th> <th>35</th>	35			3.204	2.992	2.788		2°405	2.226	2.056		35
8 3.635 3.409 3.191 2.980 2.777 2.583 2.397 2.219 2.050 1.889 9 3.628 3.403 3.186 2.976 2.774 2.580 2.394 2.216 2.047 1.887 40 3.622 3.397 3.181 2.971 2.770 2.576 2.391 2.214 2.045 1.885 1 3.615 3.391 3.175 2.966 2.765 2.572 2.388 2.211 2.043 1.882 2 3.607 3.385 3.169 2.961 2.761 2.568 2.384 2.208 2.040 1.880 3 3.599 3.377 3.163 2.956 2.756 2.564 2.380 2.204 2.037 1.878 4 3.591 3.361 3.149 2.943 2.745 2.554 2.372 2.197 2.030 1.872 45 3.581 3.361 3.141 2.936 2.739 2.549 2.367 2.193 2.027 1.869 7 3.560 3.342 </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>1</th> <th></th> <th></th> <th>6</th>									1			6
9 3.628 3.403 3.186 2.976 2.774 2.580 2.394 2.216 2.047 1.887 40 3.622 3.397 3.181 2.971 2.770 2.576 2.391 2.214 2.045 1.885 1 3.615 3.391 3.175 2.966 2.765 2.572 2.388 2.211 2.043 1.882 2 3.607 3.385 3.169 2.961 2.761 2.568 2.384 2.208 2.040 1.880 3 3.599 3.377 3.163 2.956 2.756 2.564 2.380 2.204 2.037 1.878 4 3.591 3.370 3.156 2.950 2.751 2.559 2.376 2.201 2.034 1.875 45 3.581 3.361 3.149 2.943 2.745 2.554 2.372 2.197 2.030 1.872 6 3.571 3.352 3.141 2.936 2.739 2.549 2.367 2.193 2.027 1.869 7 3.560 3.342 3.132 2.928 2.732 2.543 2.362 2.188 2.023 1.865 8 3.548 3.332 3.122 2.920 2.725 2.537 2.356 2.183 2.019 1.861 9 3.535 3.320 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.166 2.003 1.848 2 3.489 3.279 3.076 2.879 2.688 2.505 2.328 2.159 1.997 1.843 3 3.471 3.264 3.062 2.867 2.677 2.495 2.320 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.473 2.300 2.134 1.976 1.824 3 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 2.992 2.805 2.623 2.447 2.278 2.114 1.958 1.809 8 3.357 3.162 2.971 2.786 2.606 2.432 2.265 2.103 1.948 1.809						, ,						8
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2 3.607 3.385 3.169 2.961 2.761 2.568 2.384 2.208 2.040 1.880 3 3.599 3.377 3.163 2.956 2.756 2.564 2.380 2.204 2.037 1.878 4 3.591 3.370 3.156 2.950 2.751 2.559 2.376 2.201 2.034 1.875 45 3.581 3.361 3.149 2.943 2.745 2.554 2.372 2.197 2.030 1.872 6 3.571 3.352 3.141 2.936 2.739 2.549 2.367 2.193 2.027 1.869 7 3.560 3.342 3.132 2.928 2.732 2.543 2.362 2.188 2.023 1.865 8 3.548 3.332 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 </th <th>40</th> <th>3.622</th> <th>3*397</th> <th>3.181</th> <th>2.971</th> <th>2.770</th> <th></th> <th>2,391</th> <th>2.514</th> <th>2.042</th> <th>1.882</th> <th>40</th>	40	3.622	3*397	3.181	2.971	2.770		2,391	2.514	2.042	1.882	40
3 3.599 3.377 3.163 2.956 2.756 2.564 2.380 2.204 2.037 1.878 4 3.591 3.370 3.156 2.950 2.751 2.559 2.376 2.201 2.034 1.875 45 3.581 3.361 3.149 2.943 2.745 2.554 2.372 2.197 2.030 1.872 6 3.571 3.352 3.141 2.936 2.739 2.549 2.367 2.193 2.027 1.869 7 3.560 3.342 3.132 2.928 2.732 2.543 2.362 2.188 2.023 1.865 8 3.548 3.332 3.122 2.920 2.725 2.537 2.356 2.183 2.019 1.861 9 3.553 3.320 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 </th <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>_</th> <th></th> <th></th> <th>1</th>									_			1
4 3.591 3.370 3.156 2.950 2.751 2.559 2.376 2.201 2.034 1.875 45 3.581 3.361 3.149 2.943 2.745 2.554 2.372 2.197 2.030 1.872 6 3.571 3.352 3.141 2.936 2.739 2.549 2.367 2.193 2.027 1.869 7 3.560 3.342 3.132 2.928 2.732 2.543 2.362 2.188 2.023 1.865 8 3.548 3.332 3.122 2.920 2.725 2.537 2.356 2.183 2.019 1.861 9 3.553 3.320 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.156 2.003 1.848 2 3.489 3.246 </th <th></th> <th></th> <th></th> <th></th> <th>_</th> <th></th> <th></th> <th>2'384</th> <th></th> <th></th> <th></th> <th>3</th>					_			2'384				3
45 3.581 3.361 3.149 2.943 2.745 2.554 2.372 2.197 2.030 1.872 6.3571 3.352 3.141 2.936 2.739 2.549 2.367 2.193 2.027 1.869 7 3.560 3.342 3.132 2.928 2.732 2.543 2.362 2.188 2.023 1.865 8 3.548 3.332 3.122 2.920 2.725 2.537 2.356 2.183 2.019 1.861 9 3.535 3.320 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.166 2.003 1.848 2.3489 3.279 3.076 2.879 2.688 2.505 2.328 2.159 1.997 1.843 3.471 3.264 3.062 2.867 2.677 2.495 2.320 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.444 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.444 2.311 2.143 1.984 1.831 56 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 2.992 2.805 2.623 2.447 2.278 2.114 1.958 1.809 8 3.357 3.162 2.971 2.786 2.606 2.432 2.265 2.103 1.948 1.800												4
6 3.571 3.352 3.141 2.936 2.739 2.549 2.367 2.193 2.027 1.869 7 3.560 3.342 3.132 2.928 2.732 2.543 2.362 2.188 2.023 1.865 8 3.548 3.332 3.122 2.920 2.725 2.537 2.356 2.183 2.019 1.861 9 3.535 3.320 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.166 2.003 1.848 2 3.489 3.279 3.076 2.879 2.688 2.505 2.328 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484	45								2'197	2.030	1.872	45
8 3.548 3.332 3.122 2.920 2.725 2.537 2.356 2.183 2.019 1.861 9 3.535 3.320 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.166 2.003 1.848 2 3.489 3.279 3.076 2.879 2.688 2.505 2.328 2.159 1.997 1.843 3 3.471 3.264 3.062 2.867 2.677 2.495 2.320 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.473 2.300 2.134 1.976 1.824 3 3.408 3.2992<						2.739						6
9 3.535 3.320 3.112 2.911 2.717 2.529 2.350 2.178 2.014 1.857 50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.166 2.003 1.848 2 3.489 3.279 3.076 2.879 2.688 2.505 2.328 2.159 1.997 1.843 3 3.471 3.264 3.062 2.867 2.677 2.495 2.320 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.473 2.300 2.134 1.976 1.824 6 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 </th <th></th> <th></th> <th></th> <th>, ,</th> <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>8</th>				, ,	-							8
50 3.521 3.308 3.101 2.901 2.708 2.522 2.344 2.172 2.009 1.853 1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.166 2.003 1.848 2 3.489 3.279 3.076 2.879 2.688 2.505 2.328 2.159 1.997 1.843 3 3.471 3.264 3.062 2.867 2.677 2.495 2.320 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.473 2.300 2.134 1.976 1.824 6 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 2.992 2.805 2.623 2.447						_			-			9
1 3.505 3.294 3.089 2.891 2.699 2.514 2.336 2.166 2.003 1.848 2 3.489 3.279 3.076 2.879 2.688 2.505 2.328 2.159 1.997 1.843 3 3.471 3.264 3.062 2.867 2.677 2.495 2.320 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.473 2.300 2.134 1.976 1.824 6 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 2.992 2.805 2.623 2.447 2.278 2.114 1.958 1.809 8 3.357 3.162 2.971 2.786 2.606 2.432 2.265 2.103 1.948 1.800	50			_				2°344			1.853	50
3 3.471 3.264 3.062 2.867 2.677 2.495 2.320 2.151 1.991 1.837 4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.473 2.300 2.134 1.976 1.824 6 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 2.992 2.805 2.623 2.447 2.278 2.114 1.958 1.809 8 3.357 3.162 2.971 2.786 2.606 2.432 2.265 2.103 1.948 1.800	1	3.202	3.594	3.089	2,891	2.699	2°514	2°336	2,166	2.003	1.848	1
4 3.452 3.246 3.047 2.853 2.665 2.484 2.311 2.143 1.984 1.831 55 3.431 3.228 3.030 2.838 2.652 2.473 2.300 2.134 1.976 1.824 6 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 2.992 2.805 2.623 2.447 2.278 2.114 1.958 1.809 8 3.357 3.162 2.971 2.786 2.606 2.432 2.265 2.103 1.948 1.800												2 3
55 3'431 3'228 3'030 2'838 2'652 2'473 2'300 2'134 1'976 1'824 6 3'408 3'207 3'012 2'822 2'638 2'460 2'289 2'125 1'967 1'817 7 3'383 3'185 2'992 2'805 2'623 2'447 2'278 2'114 1'958 1'809 8 3'357 3'162 2'971 2'786 2'606 2'432 2'265 2'103 1'948 1'800												4
6 3.408 3.207 3.012 2.822 2.638 2.460 2.289 2.125 1.967 1.817 7 3.383 3.185 2.992 2.805 2.623 2.447 2.278 2.114 1.958 1.809 8 3.357 3.162 2.971 2.786 2.606 2.432 2.265 2.103 1.948 1.800	55										1.824	55
8 3.357 3.165 2.021 2.486 5.606 5.435 5.562 5.103 1.048 1.800	6	3.408	3.502	3.013	2.855	2.638	2°460	2.589	2,152	1.967	1.817	6
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VALUES OF ANNUITIES ON TWO JOINT LIVES.

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	90	91	92	93	94	95	96	97	98	99	100	IOI	
10	1.758	1.911	1'470	1,345	1,510	1.102	'994	'904	.816	.694	545	321	10
1 2	1.758	1.011	1,470	1.341	1,519	1'104	994	904	.816	·694	*545 *545	321	1 2
3	1.758	1.911	1.470	1.341	1,519	1'104	'994	904	.816	.694	545	321	3
4	1.757	1.911	1'470	1'341	1,512	1.104	'994	.904	.815	.694	545	.321	4
15	1.757	1.010	1.469	1.341	1'215	1.104	'994	.904	815	·694	545	.321	15
6	1.757	1.610	1.469	1.341	1.512	1.104	'993	.904	.815	.694	545	321	6
8	1.756	1.000	1.469	1,340	1.212	1,103	993	904	·815	694 694	545	321	7 8
9	1.755	1,600	1.468	1.340	1'214	1,103	993	904	.812	.694	545	321	9
20	1.755	1.608	1.468	1.340	1'214	1,103	993	'903	.812	.694	545	321	20
1	1.754	1.608	1.467	1,339	1'214	1,103	'992	.903	815	694	545	321	1
2	1.753	1.607	1.467	1,339	1.513	1.103	992	.903	.814	693	*544	.321	2
3	1.753	1.607	1'466	1,338	1,513	1'102	'992	.003	*814	. '693	544	.321	3
4	1.42	1,606	1,466	1,338	1,515	1'102	,991	902	'814	.693	544	'321	4
25	.1.751	1.604	1.465	1,334	1,511	1,101	.001	902	·814 ·814	.693	544	321	25 6
7	1.750	1.604	1.464	1,334	1,511	1,100	.000	902	.813	693	544	·320	7
8	1.748	1.603	1.463	1.332	1.510	1,100	.990	.001	.813	692	544	320	8
9	1.747	1.603	1'462	1,332	1'210	1,000	.989	.900	.813	.692	.544	.320	9
30	1.746	1.601	1.461	1.334	1,500	1,000	.989	.000	.812	.692	.543	.320	30
1	1.745	1.000	1.460	1.333	1.508	1,008	.989	.000	.812	.691	543	.320	1
3	1.744	1.299	1.459	1,335	1,508	1,008	'988 '9 8 7	.899	·812	.691	543	320	2 3
4	1.742	1.298	1.458	1,330	1.302	1.092	987	·899	.811	.691	543 543	320	4
35	1.739	1,202	1.456	1,330	1.302	1,000	.986	.898	.810	.690	542	320	35
6	1.738	1.204	1.455	1,350	1.502	1,002	.986	.897	.810	.690	542	320	6
7	1.737	1.293	1'454	1.328	1.504	1.094	.985	.897	.809	.690	542	.319	7
8	1.735	1.291	1.423	1.322	1,503	1,033	.984	.896	.809	.689	.542	.319	8
9	1.433	1,200	1.452	1,356	1.505	1,093	.984	·896	.809	.689	.241	.319	9
40	1.431	1.288	1.450	1.324	1,501	1'092	.983	.895	.808	.688	541	319	40
1 2	1.730	1.587	1.449	1,353	1,100	1,000	*982 *981	·894 ·894	·807	·688 ·688	°541	.319	1 2
3	1.725	1.283	1.446	1,350	1,108	1.080	.981	.893	.806	687	540	,319	3
4	1.723	1.281	1.444	1.310	1,196	1.088	.980	.892	.806	.687	.540	'319	4
45	1.720	1.579	1.442	1'317	1.192	1.086	.979	.891	.805	.686	.540	318	45
6	1.418	1.576	1.440	1,312	1,103	1.082	'977	.890	.804	.685	539	.318	6
7	1.412	1.274	1.438	1,313	1,105	1.084	976	.889	.803	.685	539	.318	7
8 9	1.411	1.268	1.435	1,300	1.188	1,080	'975 '973	·888 ·887	·802	·684 ·683	·538	318	8
50	1'704		1.430	1'307	1.186	1.020	973	.885	.800	682	537	'317	50
1	1'700	1.261	1'427	1'304	1.183	1.072	972	.884	799	.681	536	317	1
2	1.695	1.222	1.423	1.301	1.181	1.074	.968	.882	.798	·68o	536	317	2
3	1.690	1.223	1.420	1.508	1.148	1.072	.966	.881	'796	.679	535	316	3
4	1.682	1.248	1.412	1.594	1.172	1.000	'964	.879	'795	.678	534	.316	4
55	1.679	1.243	1'411	1'290	1'172	1.064	962	.877	793	.677	533	315	55
8 7	1.673	1.231	1,400	1.586	1.168	1.004	959	·874 ·872	791	675	·532	315	8 7
8	1.658	1.222	1,392	1.522	1,100	1.022	953	.869	.787	672	530	314	8
9	1.620	1.217	1.389	1.521	1.122	1,023	.950	.866	.784	.670	.259	313	9
	90	91	92	93	94	95	96	97	98	99	100	101	
				,,,	74	75		7,		-			

$O^{M(5)}$

TABLES OF UNIFORM SENIORITY.

TWO, THREE, AND FOUR JOINT LIVES.

For Examples of application of Tables, see page 252.

TABLE showing the number of years, (t), to be added to the age of the younger of two lives, (x), (x+h), to obtain the age of the two equivalent lives of equal ages, (x+t), and (x+t).

 $O^{M(5)}$

$$\mu_x + \mu_{x+h} = 2\mu_{x+t} a_{x;x+h} = a_{x+t;x+t}$$

7		1 7	1
h	t	h	t
0	0,00	45	37.48
1	0.21	6	38.46
2 3	1.02	7	39'44
4	2.18	8 9	40.43
5			41'42
6	2.78	50 1	42'41
7	3°40 4°04	2	43°40 44°39
8	4.40	3	45.38
9	5'39	4	46.37
10	6.09	55	47.36
1	6.81	6	48.36
2	7.54	7	49'35
3	8.30	8	50'34
4	9.07	9	51.34
15	9.86	60	52.33
6 7	10.66	1 2	53.33
8	12,30	3	54°33 55°32
9	13'14	4	56.35
20	13,00	65	57.32
1	14.85	6	58.31
2	15.73	.7	59.31
3	19.91	8	60.31
4	17.20	9	61.30
25	18.40	70	62.30
6 7	19,31	1	63.30
8	20,53	2 3	64'30 65'30
9	22.08	4	66.30
30	23.01	75	67.30
1	23.02	6	68.30
2	24.89	7	69.29
3	25.84	8	70.59
4	26.80	9	71.29
35	27.75	80	72.29
6 7	28.71	1	73.29
8	29.68	2 3	74'29
9	31.91 30.94	4	75'29 76'29
40	32.28	85	
1	33.26	6	77°29 78°29
2	34.24	7	79.59
3	35.21	8	80.50
4	36.20	9	81.59
		90	82.29
		1	83.29
		2	84.29

TABLE showing the number of years, (t), to be added to the age of the youngest of three lives, (x), (x+h), (x+h+k), to obtain the age of the three equivalent lives of equal ages, (x+t), (x+t), and (x+t).

OM(5)

 $\mu_{x} + \mu_{x+h} + \mu_{x+h+k} = 3\mu_{x+t}$ $\alpha_{x:x+h:x+h+k} = \alpha_{x+t:x+t:x+t}$

					- L . LO TIL .	a Th Th	ux+t:x+	rt.art			
						h					
k	0	1	2	2		-	6	h 19	8		k
	0			3	4	5	0	7	0	9	
0	.00	.68	1.37	2.00	2.85	3.57	4.34	5.13	5.01	6.43	0
1 2	34	1.03	1.4	2°46 2°85	3.50	3.96	4.73	5.2	6.33	7'14	1 2
3	1,00	1°40	2.25 5.15	3.52	3.60 4.03	4°37 4°80	5°15	5°95 6°40	6.76 7.22	7°59 8°05	3
4	1.20	2'22	2.92	3.40	4°47	5.56	6.06	6.87	7.70	8.24	4
5	1.03	2.66	3.40	4.16	4°94	5.74	6.54	7°37	8.30	9.05	5
6	2.38	3°12	3.87	4.65	5.43	6.24	7.05	7.88	8.72	9.28	6
7	2.82	. 3.60	4'37	5°15	5°95	6.76	7.28	8.42	9'27	10.13	7
8 9	3'35	4°11	4.88	5.68	6.48	7.30	8.14	8.98	9.84	10.41	8
	3.86	4.63	5.42	6.23	7.04	7.87	8.71	9°57	10.43	11.30	9
10 1	4°40 4°96	5°19	5°98	6.80	7.62 8.22	8.46	6,31	10.14	11.68	11'92	10
2	5.22	5°76 6°35	7.17	7°39 8°00	8.85	9°07	10.22	11.44	12'33	13,25	1 2
3	6.12	6'97	7.80	8.64	9'49	10.32	11.53	12,11	13,00	13,00	_ 3
4	6.48	7.61	8.44	9,59	.10,19	11.03	11.01	12.80	13.40	14.60	4
15	7.43	8.56	9,11	9.97	10.84	11.72	13,61	13.20	14.41	15.32	15
6	8.10	8.94	9.80	10.67	11.24	12.43	13.32	14.23	15'14	16.06	6
7 8	8.78	9.64	10.20	11,38	12.50	13,19	14°06 14°81	14'97	15.89	16.81	7 8
9	9'49	10,32	11.53	15,86	13.00	13.90	15.28	15.73	16.65 17.43	17.58	9
20	10,06	11.84	12.73	13.63	14.23	15.44	16.36	17.29	18.55	19,16	20
1	11'72	12.61	13.20	14'41	15°32	16.54	17'16	18.10	19.03	19.08	1
2	12'49	13.39	14.29	15.50	16.13	17.05	17.98	18.91	19.86	20.80	2
3	13.58	14.19	15.10	16,01	16.94	17.87	18.80	19.74	20.69	21.64	3
4	14.09	15.00	15,91	16.84	17.77	18.40	19.64	20.29	21.24	22,49	4
25	14.91	15.82	16.75	17.67	18.61	19.22	20°49	21'44	22'40	23.35	25
6 7	15.74	16.66	17.59	18.2	19.46	20.41	21°36	23.18	23°27 24°14	24.23	6
8	17.44	18.37	19,31	20.5	21,50	22°15	53,11	24.07	25°03	26.00	8
9	18.30	19.24	20,18	51,13	22°08	23.04	24.00	24.96	25.93	26.90	9
30	19.18	20'12	21.07	22'02	22.98	23'94	24.00	25.86	26.83	27.81	30
1	20.06	21.01	21.96	22.92	23.88	24.84	25.81	26.77	27.75	28.72	1
2	20.96	21'91	22.87	23.82	24.79	25.75	26.72	27.69	28.66	29.64	2
3 4	21.86	22.82	23.7 8 24. 69	24'74	25.70	26.67 27.60	28.57	28.62	29°59 30°52	30.22	3 4
35	23.69	24.65	25.62	26.29	27.22	28.23		30.48	31.46	32.44	35
6	24.61	25.58	26.24	27.2	28.49	29.47	29.20	31.42	32.40	33'39	.6
7	25.24	26.21	27.48	28.45	29.43	30,41	31'39	32'37	33'35	34.33	7
8	26.48	27.45	28'42	29.40	30.37	31.32	32.33	33'32	34.30	35'29	8
9	27.42	28.39	29.37	30.34	31,35	32'30	33°29	34.57	35°25	36.54	. 9
40	28.36	29.34	30.35	31,30	32.58	33'26	34°24	35'23	36.51	37.20	40
1 2	29.31	30.50	31.52	32.52	33'23	34°22	36.19	36.13	37.18	38.13	1 2
3	30.52	31,52	32.53	33.51	32.19	36.14	37.13	38.15	39,11	40.10	3
4	35.10	33.12	34.12	35.14	36.15	37.11	38.10	39.09	40.08	41.07	4
45	33.12	34.14	35'12	36.11	37'10	38.08	39.07	40.06	41.05	42.05	45
6	34.15	35.10	36.09	37.08	38.07	39.06	40.02	41'04	42.03	43.02	6
7	35.09	36.07	37.06	38.02	39.04	40.03	41'02	42'02	43.01	44.00	7
8 9	36.06	38.03	38.04	39.03	40.02	41'01	42.00	42'99	43.99	44.98	8
-									8		
	0	I	2	3	4	5	6	7	0	9	

TABLE showing the number of years, (t), to be added to the age of the youngest of three lives, (x), (x+h), (x+h+k), to obtain the age of the three equivalent lives of equal ages, (x+t), (x+t), and (x+t).

OM(5)

 $\mu_{x} + \mu_{x+h} + \mu_{x+h+k} = 3\mu_{x+t}$ $\alpha_{x:x+h:x+h+k} = \alpha_{x+t:x+t:x+t}$

,						h					,
k	10	II	12	13	14	15	16	17	18	19	k
0 1 2 3	7°55 7°98 8°42 8°89	8·39 8·82 9·27	9°24 9°67 10°13	10°10 10°54 11°01	10°97 11°42 11°89	11.85 12.30 12.78 13.27	12.74 13.19 13.67 14.18	13.63 14.10 14.28	14.24 12.01 12.49	15.45 15.92 16.41 16.93	0 1 2 3
4 5 6	9°39 9°90 10°44	9°75 10°25 10°77 11°32	11.12	12.00	13.43 13.43	13.80	14.70 15.25 15.82	15.62 16.14	16.24 17.67	17°47 18°02 18°61	4 5 6
7 8 9	12.81 13.10 11.28	11.88 12.47 13.08	12'77 13'37 13'98	13.67 14.27 14.89	14.28 15.18 15.81	15.49 16.10 16.43	16.41 17.02 17.66	17°34 17°95 18°59	18.27 18.89 19.53	19.83 20.48	7 8 9 10
1 2 3 4	13.46 14.13 14.81 15.52	14.36 15.04 15.73 16.44	15.38 15.95 16.65 17.36	16.88 14.28	17.12 17.81 18.21	18.05 18.74 19.45 20.18	18.39 19.68 20.39	19°93 20°63 21°34 22°08	20.88 21.28 22.30 23.03	21.83 22.53 23.25 23.99	1 2 3 4
15 6 7 8 9	16.24 16.98 17.74 18.51	17°16 17°91 18°67 19°45 20°24	18.10 18.85 19.61 20.40 21.19	19°03 19°79 20°56 21°34 22°14	19'98 20'73 21'51 22'30 23'10	20°92 21°68 22°46 23°25 24°06	21.87 22.64 23.42 24.21 25.02	22.83 23.60 24.38 25.18 25.99	23°79 24°56 25°34 26°14 26°96	24'75 25'52 26'31 27'11 27'93	15 6 7 8 9
20 1 2 3 4	20°10 20°92 21°75 22°59 23°45	21.05 21.87 22.71 23.55 24.41	22'00 22'83 23'67 24'51 25'37	22.96 23.79 24.63 25.48 26.34	23'92 24'75 25'59 26'45 27'31	24.88 25.72 26.56 27.42 28.29	25.85 26.68 27.53 28.39 29.26	26.82 27.65 28.50 29.36 30.24	27°79 28°63 29°48 30°34 31°22	28.76 29.60 30.46 31.32 32.20	20 1 2 3 4
25 6 7 8 9	24°31 25°19 26°08 26°97 27°87	25°28 26°16 27°04 27°94 28°84	26.24 27.13 28.02 28.91 29.82	27'22 28'10 28'99 29'89 30'80	28.19 29.07 29.97 30.87 31.78	29°16 30°05 30°94 31°85 32°76	30'14 31'03 31'92 32'83 33'74	31°12 32°01 32°81 34°73	32°10 32°99 33°89 34°80	33.08 33.97 34.88 35.78 36.70	25 6 7 8 9
30 1 2 3 4	28.78 29.70 30.62 31.55 32.48	29°75 30°67 31°60 32°53 33°46	30'73 31'65 32'58 33'51 34'45	31.71 32.63 33.56 34.50	32.69 33.62 34.55 35.48 36.42	33.68 34.60 35.53 36.47 37.41	34.66 35.59 36.52 37.46 38.40	35.65 36.58 37.51 38.45 39.39	36.63 37.56 38.50 39.44 40.38	37.62 38.55 39.49 40.43 41.37	30 1 2 3 4
35 6 7 8 9	33.42 34.37 35.32 36.27 37.23	34°41 35°35 36°31 37°26 38°22	35'39 36'34 37'29 38'25 39'21	35°44 36°38 37°33 38°28 39°24 40°20	37.37 38.32 39.27 40.23 41.19	38·36 39·31 40·26 41·22 42·18	39°35 40°30 41°25 42°21 43°18	40°34 41°29 42°24 43°21 44°17	41°33 42°28 43°24 44°20 45°16	42'32 43'28 44'23 45'19 46'16	35 6 7 8 9
40 1 2 3 4	38.19 39.15 40.12 41.09	39.18 40.14 41.11 42.08	40°17 41°14 42°11 43°08	41°16 42°13 43°10 44°07	42°15 43°12 44°09 45°07	43°15 44°11 45°06 46°06	44°14 45°11 46°08 47°05	45'13 46'10 47'08 48'05 49'02	46°13 47°10 48°07 49°04	47°12 48°09 49°07 50°04 51°02	40 1 2 3 4
45 6 7 8	43°04 44°02 45°00 45°98 46°96	43°06 44°03 45°01 45°99 46°97 47°95	44°05 45°03 46°00 46°99 47°97 48°95	45°04 46°02 47°00 47'98 48'96 49'94	46°04 47°02 48°00 48°98 49°96 50°94	47°03 48°01 48°99 49°97 50°95 51°94	48°03 49°01 49°99 50°97 51°95 52°93	50.00 50.98 51.97 52.95 53.93	50°02 51°00 51°98 52°96 53°94 54°93	52°00 52°98 53°96 54°94 55°93	45 6 7 8 9
	10	II	12	13	14	15	16	17	18	19	

Table showing the number of years, (t), to be added to the age of the youngest of three lives, (x), (x+h), (x+h+k), to obtain the age of the three equivalent lives of equal ages, (x+t), (x+t), and (x+t).

OM(5)

 $\mu_{x} + \mu_{x+h} + \mu_{x+h+k} = 3\mu_{x+t}$ $a_{x;x+h:x+h+k} = a_{x+t;x+t:x+t}$

	$a_{x;x+h:x+h+k} = a_{x+t:x+t:x+t}$										
					7	i					
k	20	21	22	22		1	26	27	28	20	k
	20			23	24	25				29	
0	16.37	17:30	18.23	19'17	20'11	21.06	22'01	22.07	23'93	24.89	0
1	16.82	18.27	18.41	19.65	20.60	21.22	22.20	23.46	24.42	25.38	$\frac{1}{2}$
3	17.34	18.79	19'21	20.68	21,10	22.02	23.21	23'97	25.47	25.90	3
4	18.40	19.34	20.58	21,53	55,18	23.14	24'10	25.06	26.03	27.00	4
5	18.96	19.00	20.85	21.80	22.76	23.71	24.68	25.64	26.61	27.58	5
в	19.22	20.49	21'44	22.39	23.35	24.31	25.27	26.24	27.51	28.19	.6
7	20.12	21.10	22.02	23.01	23.97	24.93	25.90	26.87	27.84	28.81	7
8 9	20.48	21.43	22.68	23.64	24.60	25.23	26.24	27.51	28.48	30,15	8
	21'43	22.38	23.34	24'30	25.26				29.83	30.81	
10	22.09	23.05	24.01	24°97 25°67	25.94	26.91	27.88 28.58	28.85	30.23	31.21	10
2	23.49	24.45	25.41	26.38	27.35	28.33	29.30	30.58	31.56	32.54	2
3	24'21	25.18	26.14	27'11	28.09	29.06	30.04	31.03	32.00	32.98	3
4	24.96	25.92	26.89	27.86	28.84	29.81	30.79	31.44	32'75	33.74	4
15	25.42	26.68	27.65	28.63	29.60	30.28	31.26	32.24	33.53	34.21	15
6	26.49	27.46	28.43	29'41	30.39	31.37	32.35	33'33	34.31	35.30	6
8	27.28	28.52	29'23	30,51	31,10	32.17	33.12	34°13 34°95	35°12	36.10	8
9	28.91	29.88	30.86	31.84	32.82	33.80	34'79	35.78	36.76	37.75	9
20	29.74	30.41	31'70	32.68	33.66	34.64	35.63	36.62	37.60	38.29	20
1	30.28	31.26	32.24	33.23	34.21	35.20	36.48	37.47	38.46	39°45	1
2	31.44	32'42	33.40	34.38	35'37	36.36	37°34	38.33	39°32	40°31	2
3	32.30	33'29	34°27	35°25	36°24	37'23	38'22	39'21	40.20	41.19	3
4	33.18	34.19	35.12	36.13	37.12	38.11	39,10	40.09	41.08	42.07	4
25 6	34.06	35.02	36.03	37.02	38.01	39.00	39'99	40.98	41.98 42.88	42'97 43'87	25 6
7	34.96	35°94 36°85	37.84	37.92	39.82	39.90	41'80	42.79	43.79	44.78	7
8	36.77	37.76	38.75	39.74	40.73	41.72	42.71	43.71	44.70	45.70	8
9	37.69	38.68	39.67	40.66	41.65	42.64	43.64	44.63	45.62	46.62	9
30	38.61	39.60	40.29	41.29	42.28	43.57	44.57	45.26	46.22	47.55	30
1	39.54	40.23	41.2	42.2	43.21	44.20	45.20	46.49	47.49	48.48	1
$\begin{vmatrix} 2 \\ 3 \end{vmatrix}$	40.48	41.47	42.46	43.45	44.45	45.44	46.44	47'43	48.43	49'42	2 3
4	42.36	43.36	43.40	45'34	46.34	47.33	48.33	49.32	50.35	51.32	4
35	43.31	44.31	45.30	46.30	47.29	48.29	49.28	50.58	51.27	52.27	35
6	44.57	45.56	46.56	47.25	48.25	49'24	50.54	51.53	52.53	53.53	6
7	45.23	46.22	47.22	48.31	49.21	50.50	51.50	52.50	23.19	54.19	7
8	46.19	47'18	48.18	49'17	50.12	51.17	52.16	53.16	54.19	22,12	8 9
9	47.15	48.12	49'14	50'14	21,13	52.13	23,13	54.13	55.13		
40	48.13	20,00	21.08	21,11	23.08	53.10	54.10	56.04	56.09	57.09	40
2	49.09	20.00	52.06	52.08	54.05	54°07 55°05	55.04	57.04	58.04	59.04	2
3	51.04	25.03	23.03	54.03	55.02	29.03	57.02	58.02	59.03	60.03	3
4	52.01	23.01	54.01	22.01	56.00	57.00	58.00	59.00	60.00	61.00	4
45	52.99	53.99	54.99	55.99	56.98	57.98	58.98	59.98	60.98	61.98	45
6	53'97	54'97	55'97	56.97	57.96	58.96	59.96	60.96	61.96	62.04	6 7
8	54.96	55.95	56.95	57.95	58.95	59.95	60.94	61,94	62.94	63.94	8
9	55'94	57.92	57.94	59.92	59'93	61.92	62.92	63.92	64.91	65.91	8
-	20	21	22	23	24	25	26	27	28	29	
		1		1 -3		1 -5			1		

Table showing the number of years, (t), to be added to the age of the youngest of three lives, (x), (x+h), (x+h+k), to obtain the age of the three equivalent lives of equal ages, (x+t), (x+t), and (x+t).

OM(5)

 $\mu_x + \mu_{x+h} + \mu_{x+h+k} = 3\mu_{x+t}$ $a_{x,x+h,x+h+k} = a_{x+t,x+t,x+t}$

 $\Omega M(5)$

O.	IL(U)									_(0)	
,						h					7.
k	30	31	32	33	34	35	36	37	38	39	k
0	25.85	26.82	27.80	28.77	29.75	30'72	31.40	32.69	33.67	34.65	0
1 2	26.87	27.32	28.81	29.27	30.24	31.75	32.21	33.11	34'17	35.18	1 2
3	27.41	28.38	29'35	30.33	31'31	32.29	33'27	34.26	35.24	36.23	3
4	27.97	28.94	29.92	30.90	31.88	32.86	33.84	34.83	35.81	36.80	4
5 6	28.22	29.23	30,21	31,40	32.47	33°45 34°06	34°43 35°04	35.42	36.41	37.39 38.01	5 6
7	29.79	30.77	31.74	32.72	33'71	34.69	35.68	36.67	37.65	38.64	7
8 9	30.43	31.41	32.39	33°38 34°05	34.36	35°34 36°02	36.33	37 ³² 37 ⁹⁹	38.31	39.30	8
10	31.79	32.77	33.75	34.74	35.72	36.41	37.70	38.69	39.68	40.67	10
1	32.49	33.48	34.46	35°45	36.43	37.42	38.41	39.40	40.39	41.38	1
3	33.36	34.20	35.13	36.18	37.16	38.00	39.14	40.88	41.87	42.86	3
4	34.72	35.41	36.69	37.68	38.67	39.66	40.65	41.64	42.64	43.63	4
15	35.20	36.48	37.47	38.46	39.45	40'44	41.43	42'42	43°42	44.41	15
6 7	36.29	37°27 38°08	38.26	39.25	40.24	41.23	42.53	43.22	44.21	45.21	6 7
8	37'91	38.90	39.89	40.88	41.87	42.87	43.86	44.85	45.84	46.84	8
9 20	38.74	39.73	40.72	41.71	42.41	43.70	44.69	45.69	46.68	47.68	9
1	39.58	40.58	41.56	43.42	43.55	44°54 45°40	45.24	46.53	47.53 48.39	48.52	20
2	41.30	42.30	43°29	44.28	45.28	46.27	47'27	48.26	49.26	50.52	2
3 4	42.18	43.17	44.17	45.16	46.12	47.15	48.14	49.14	50.14	51'13	3 4
25	43.96	44.95	45'95	46.94	47.94	48.93	49.93	50.03	51.02	52.02	25
6 7	44.86	45.86	46.85	47.85	48.84	49.84	50.83	51.83	52.83	53.83	6
8	45.77	46.77	47.76	49.68	49°75 50°67	50.75	51.75	52°74 53°66	53.74	54.74 55.66	8
9	47.61	48.61	49.61	50.60	51.60	52.60	53.29	54.29	55.59	56.29	9
30	48.55	49°54 50°48	50.23	51°53 52°47	52.23	53.53	54°52 55°46	55°52 56°46	56.52	57.52	30
2	50.42	51.42	52.41	53.41	53°47 54°41	54.46	56.40	57°40	57.46	58.46	2
3 4	51.36	52.36	53.36	54.35	55.35	56.35	57.35	58.35	59.35	60.35	3
35	52.32	53.31	54.31	56.31	56.30	57.30	58.30	59.30	60.30	62.30	35
6	54°23	55.22	56.55	57.22	28.55	59.22	60.51	61.51	62.31	63.51	6
7 8	22,12	56.12 26.13	58.12	28.18	59.18	91.12 90.18	61°18	62.18	63.18	64.17	7 8
9	57.13	28.13	20,13	90,11	61,11	62,11	63.11	63.14	64.14	66.11	9
40	58.09	59.09	60.09	61.09	62.08	63.08	64.08	65.08	66.08	67.08	40
1 2	59.06	60.06	62.03	62.06	63.06	64.06	65.06	66.03	67.05	68.03	1 2
3	61.01	62.01	63.01	64.01	65.01	66.01	67.01	68.01	69.01	70'01	3
4 45	61.99	62.99	63.99	64.99	65.99	66.99	67.99	68.99	69.99	70.99	4
8	63.96	63.97	64.97	65°97	66.97	67.97 68.95	68.97	69°97	70'97	71.97	45 6
7 8	64.94	65.94	66.94	67.94	68.94	69.94	70.04	71.93	72.93	73'93	7
9	65.93	66.91	67.92	68.91	69°92	70.03	71'92	72.91	73.92	74.92 75.91	8
	30	31	32	33	34	35	36	37	38	39	

TABLE showing the number of years, (t), to be added to the age of the youngest of three lives, (x), (x+h), (x+h+k), to obtain the age of the three equivalent lives of equal ages, (x+t), (x+t), and (x+t).

OM(5)

 $\mu_{x} + \mu_{x+h} + \mu_{x+h+k} = 3\mu_{x+t}$ $a_{x:x+h:x+h+k} = a_{x+t:x+t:x+t}$

U	·		$a_{x:x+h:x+h}$	$a_{k+k} = a_{x+t:x}.$	+t:x+t	U	TIT (D)
7			. 7	'n			7
k	40	50	60	70	80	90	k
0 1 2 3	35.64 36.14 36.67	45°55 46°06 46°59	55°51 56°56	65°50 66°54	75°49 76°00 76°54	85.49 86.00 86.53	0 1 2
4 5	37°22 37°79 38°38	47'14 47'72 48'31	57°11 57°69 58°28	67°10 67°67 68°27	77°09 77'67 78°27	0	
8 9	39°00 39°63 40°29 40°97 41°66	48.93 49.57 50.23 50.91	58.90 59.54 60.21 60.89	68·89 69·53 70·20 70·88	78:89 79:53 80:19 80:88 81:58	79°77 78°77 77°77 76°78	92 1 90 89
1 2 3	42°38 43°11 43°86	52°33 53°06 53°81	62'31 63'04 63'80	72°30 73°04 73°79	82°29 83°03	75'78 74'78 73'78	8 7 6
15 6	44°62 45°40	54°58 55°37	65.35	74°56 75°34	10	72'78 71'78	5 84
7 8 9	46°20 47°01 47°83 48°67	56°16 56°98 57°81 58°65	66°15 66°97 67°79 68°63	76°15 77°22 77°79 78°63	79°78 78°78 77°78	70.78 69.78 68.78 67.78	3 2 1 80
20 1 2 3 4	49°52 50°38 51°25 52°13	59°50 60°36 62°11	69°49 70°35 71°22 72°10	79°48 80°34 81°22	76.78 75.78 74.78 73.78	66.79 65.79 64.79 63.79	79 8 7 6 5
25 6	53°02 53°92 54°82	63.00 64.81	72*99 73*89 74*80	20	72°79 71°79 70°79	62°79 61°80 60°80	74 3
7 8 9	55.74 56.66 57.58	65°72 66°64 67°57	75°72 76°64 77·57	79°79 78°79 77°79	69 . 79 68.79 67.80	59.80 58.81 57.81	2 1 70
30 1 2 3	58·52 59·45 60·40 61·34	68°50 69°44 70°39 71°34	78°50 79°44 80°38	76°79 75°80 74°80 73°80	66.80 65.80 64.81 63.81	56.81 55.82 54.82 53.83	69 8 7 6
35 6	62°29 64°21	72°29 73°24 74°20	30	72.81 71.81 70.81	62.81 61.82 60.82	52.83 51.84 50.84	5 64 3
7 8 9	65°17 66°14 67°11	75'17 76'13 77'10	79°81 78°82 77°82	69.82 68.82 67.83	59 [.] 83 58 [.] 83 57 [.] 84	49.85 48.86 47.87	2 1 60
40 1 2 3	68.08 69.03 71.01	78.07 79.05 80.02	76.83 75.83 74.84 73.85	66.83 65.84 64.84 63.85	56.85 55.85 54.86 53.87	46.88 45.89 44.90 43.91	59 8 7 6
4 45 6	71°99 72°97 73°95	40	72.85 71.86 70.87	62.86 61.87 60.88	52°88 51°89 50°90	42°93 41°94 40°96	54 3
7 8 9	74'93 75'92 76'91	79°87 78°88 77°90	69·88 68·89 67 · 90	59.89 58.90 57.91	49°91 48°93 47°94	38.01 38.03 30.08	2 1 50
	40	40	30	20	10	0	

Table showing the number of years, t, to be added to x in the case of four lives, (x), (x), (x), (x+k), to obtain the age of the four equivalent lives of equal age (x+t), (x+t), (x+t), and (x+t); the value of x being first obtained from the Table for three lives on pages 245 to 249.

OM(5)

 $3\mu_x + \mu_{x+k} = 4\mu_{x+t}$ $a_{x,x,x,x+k} = a_{x+t,x+t,x+t}$

7.	1 .0		.5		1 .4	• [.6	***	.8	1 :0	D'm	1 7
k	0.	.I		.3	-4	.5		.7	-	.0	Diff.	k
0	.00	.03	.02	.08	.10	.13	.19	.18	'2 I	.23	3	0
1 2	26	29	31	34	37	°40	42	45	.48	*50	3	1
3	·53 ·83	·56 ·86	.59 .89	·62	·65	.68	71	1.05	1.08	.80	3	2 3
4	1.14	1.12	1,51	1.54	1.58	1,31	1.34	1.38	1.41	1.11	3	4
5	1.48	1.25	1.22	1.20	1.62	1.66	1.69	1.73	1.42	1.80		5
6	1.83	1.87	1,00	1.04	1.08	2.03	2.02	2'09	2.13	2,19	4	6
7	2.50	2.24	2.58	2.32	2.36	2.40	2.44	2.48	2.25	2.26	4	7
8	2.60	2.64	2.68	2.73	2.77	2.81	2.85	2.89	2.94	2.08	4	8
8	3.05	3.06	3,11	3.12	3,19	3.54	3,58	3.35	3.36	3.41	4	9
10	3.45	3.20	3.54	3.25	3.64	3.69	3°73	3.48	3.83	3.87	5	10
1	3'92	3.97	4.02	4.06	4.11	4.19	4.51	4.56	4.30	4.35	5 5 6	1
2 3	4.40	4°45 4°95	4.20	4°55 5°06	4.00	4.65	4.70	4.75	4.80	4.85	5	2 3
4	4.90 5.43	5'49	5.24	5.60	5.65	5.11	5.22	5.82	5°32 5°87	5°38 5'93	5	4
15	5.08	6.04	6.10	6.12	6.51	6.27	6.33	6.39	6.44	6.20	6	15
6	6.26	6.62	6.68	6.74	6.80	6.86	6.91	6.97	7.03	7.09	6	6
7	7.12	7.21	7.27	7.34	7.40	7.46	7.52	7.58	7.65	7.71	6	7
8	7.77	7.83	7.90	7.96	8.03	8.09	8.12	8.31	8.27	8.34	6	8
8	8.40	8.47	8.23	8.60	8.66	8.73	8.80	8.86	8.93	8.99	7	9
20	9.06	9,13	9.50	9.56	9.33	9.40	9°47	9.24	9.60	9.67	7	20
1	9'74	9.81	9.88	9.92	10'02	10,00	10.19	10°23	10.30	10.37	7	1
3	10'44	10,21	10.28	10.62	10.72	10,80	10.87	10.04	11,01	11.08	7	2 3
4	11.89	11.97	11.30	11.37	11.45	11.22	11.234	11.67	11.74	11.82	7 8	4
25	12.64	12.72	12.4	12.87	12.04				-		8	25
6	13'40	13.48	13.26	13.64	13.72	13.80	13.10	13.17	13.52	13.32	8	6
7	14.19	14.27	14'35	14.43	14.21	14.29	14.66	14.74	14.82	14'90	8	7
8	14.98	15.06	15.14	15.22	15.30	15.39	15.47	15.22	15.63	15.41	8	8
9	15.79	15.87	15.96	16.04	16,15	16.51	16.59	16.37	16.45	16.24	8	9
30	16.62	16.40	16.49	16.84	16.96	17.04	17.12	17.21	17'29	17.38	8	30
1	17.46	17.55	17.63	17.72	17.80	17.89	17.97	18.06	18.14	18.23	9	1
3	18.31	18.40	18.48	18.57	18.65	18.74	18.83	18.91	19.00	19.08	9	2 3
4	20.04	20.13	19,34	19.43	10.23	20.48	20.22	19.78	20'74	20.83	9	4
35	20.03	21'01	21'10	21,10	21.58	21.37	21.45	21.24	21.63	21.72	9	35
6	21.81	21.00	21'99	22.08	22'17	22.26	22.35	22.44	22.23	22.62	9	6
7	22.71	22.80	22.89	22'98	23.07	23.10	23.52	23.34	23.43		9	7
8	23.61	23.40	23'79	23.89	23.08	24.07	24°16	24.25	24.35	24'44	9	8
9	24.23	24.62	24.41	24.81	24.00	24.99	25.08	25.14	25.52	25.36	9	9
40	25'45	25.24	25.64	25.73	25.82	25.92	26.01	26.10	26.19	_	9	40
1 2	26.38	26.47	26.24	26.66	26.75	26.85	26.94	27.03	27'12		9	1
3	27.31	28.34	27.50	27.59	27.68	27.78	27.87	28.91	28.02		9	2 3
4	29.10	29.29	29.38	29.48	29.57	29.67	29.76	29.86	29.95	30'05	10	4
45	30'14	30.54		30.43	30.2	30.62	30'71	30.81	30.00	31,00	10	45
6	31.00	31,10		31.38	31.47	31.2	31.66	31.76	31.85		10	6
7	32.04	32'14		32.33	32'42	32.22	32.62	32.41	32.81	32.00	10	7
8	33.00	33.10	33.10	33.29	33'39	33.49	33.28	33.68	33.78	33.87	10	8
8	33.97	34.07	34.16	34.50	34'35	34.45	34.55	34.64	34'74	34.83	10	9

Table showing the number of years, t, to be added to x in the case of four lives, (x), (x), (x), (x+t), to obtain the age of the four equivalent lives of equal age (x+t), (x+t), (x+t), and (x+t); the value of x being first obtained from the Table for three lives on pages 245 to 249.

 $O^{M(5)}$

 $3\mu_x + \mu_{x+k} = 4\mu_{x+t}$ $a_{x,x,x,x+k} = a_{x+t,x+t,x+t,x+t}$

-												
k	.0	.I	.5	.3	*4	5	.6	.7	.8	.0	Diff.	k
50	34'93	35.03	35.13	35.22	35.32	35.42	35.21	35.61	35.71	35.80	10	50
1	35.90	36.00	36.09	36.19	36.29	36.39	36.48	36.28	36.68	36.77	10	1
2	36.87	36.92	37.07	37.16	37.26	37°36	37°46	37.56	37.65	37.75	10	2
3	37.85	37.95	38.04	38.14	38.24	38.34	38.43	38.23	38.63	38.72	10	3
4	38.82	38.92	39.05	39,11	39.51	39,31	39,41	39.21	39.60	39.70	10	4
55	39.80	39.90	40.00	40.09	40.10	40.59	40.39	40'49	40.28	40.68	10	55
6	40.48	40.88	40.08	41.07	41°17	41'27	41.37	41'47	41.26	41.66	10	6
7	41.76	41.86	41.96	42.02	42'15	42.5	42°35	42.45	42'54	42.64	10	7
8	42.74	42.84	42.94	43°04	43°14	43°24	43.33	43'43	43.53	43.63	10	8
9	43.73	43.83	43.93	44.03	44.13	44.33	44.32	44.42	44.2	44.62	10	9
60	44.72	44.82	44.92	45.01	45.11	45.51	45'31	45'41	45.50	45.60	10	60
1	45'70	45.80	45.00	46.00	46.10	46.30	46.29	46.39	46'49	46.29	10	1
2	46.69	46.79	46.89	46.99	47.09	47'19	47.28	47.38	47.48	47.58	10	2
3	47.68	47.78	47.88	47.98	48.08	48'18	48°27	48.37	48.47	48.57	10	3
4	48.67	48.77	48.87	48.97	49.07	49'17	49'26	49'36	49.46	49.26	10	4
65	49.66	49.76	49.86	49.96	50.09	20.19	50.52	20.32	50.45	50.22	10	65
6	50.65	50.75	50.85	50.02	51.05	21,12	51°24	51.34	51.44	51.24	10	6
7	51.64	51.74	51.84	51.94	52.04	52°14	52.24	52.34	52°44	52°54	10	7
8	52.64	52.74	52.84	52'94	53.04	53°14	53.23	53.33	53.43	53.53	10	8
9	53.63	53.73	53.83	53.93	54.03	54.13	54.53	54'33	54.43	54.23	10	9
70	54.63	54.73	54.83	54.93	55.03	55.13	55,55	55.33	55.42	55.25	10	70
1	55.62	55.72	55.82	55.92	56.02	56.13	56.22	56.33	56'42	56.2	10	1
3	56.62	56.72	56.82	56.92	57'02	57.12	57'21	57.31	57.41	57.51	10	2
4	57.61	57.71 58.71	57.81 58.81	58.91 58.91	58.01	28.11	58.51	58.31	58.41	58.21	10	3 4
					59.01	59,11	59°20	59.30	59°40	59.20	10	
75	59.60	59.70	59.80	59.90	60.00	60,10	60.30	60.30	60'40	60.20	10	75
7	61.60	60'70	61.80		61.00	61.10	61.50	61.30	61'40	61.20	10	6
8	62.29	62.69	62.79	62.89	62.00	63.09	62'19	62:29	62'39	62.49	10	7 8
9	63.29	63.69	63.79	63.89	63.99	64.00	64.19	63.29	63 ³ 9	63.49	10	9
80	64.29	64.69	64.79	64.89	64.00				\$	64.49		80
1	65.29	65.69	65.79	65.89	65.99	66.09	66.19	65.29	65.39	66.49	10	1
1 2	66.29	66.60	66.79	66.89	66.99	67.09	67.18	67.28	67.38	66.49	10	2
3	67.28	67.68	67.78	67.88	67.98	68.08	68.18	68.58	68.38	68.48	10	3
4	68.58	68.68	68.78	68.88	68.98	69.08	99.18	69.28	69.38	69.48	10	4
85	69.58	69.68	69.78	69.88	69.98	70.08	20.18	70.58	70.38	70.48	10	85
8	70.28	70.68	70'78	70.88	70.08	71'08	71'18	71'28	71.38	71.48	10	6
7	71.28	71.68	71.78	71.88	71'98	72.08	72°18	72.28	72.38	72.48	10	7
8	72.28	72.68	72.78	72.88	72.98	73.08	73.18	73.58	73.38	73.48	10	8
9	73.28	73.68	73.78	73.88	73.98	74.08	74.17	74.27	74'37	74'47	10	9
90	74.57	74.67	74.77	74.87	74.97	75°07	75.17	75.27	75'37	75'47	10	90
1	75.57	75.67	75.77	75.87	75'97	76.07	76'17	76.27	76.37	76.47	10	1
2	76.57	, , ,	, , , ,	, ,	, , , ,			, , ,	1 - 31	, 4,		2

EXAMPLES

Illustrating the application and use of the Tables of Uniform Seniority, and of values of Annuities on two, three, and four lives of equal age, on pp. 244-275, both inclusive.

(1) JOINT ANNUITY ON Two LIVES. Required the value at 3 per cent. of a Joint Annuity on two lives aged 20 and 30.

Here the difference h between the ages=10, and entering the Table on p. 244 with this value of h, the tabular value t=6.09. Thus the value of the required Annuity is equal to that of an Annuity on two lives of equal age 26.09. From the Table of Annuity Values on p. 262-3, we have

with a "Difference" of -22

Deducting $\frac{0}{10}$ ths of this difference, the value of the required Annuity $a_{2600} = 17.456$ approximately.

(2) JOINT ANNUITY ON THREE LIVES. Required the value at 3 per cent. of a Joint Annuity on three Lives aged 20, 30 and 45.

Here the difference (h) between the two youngest lives=10, and the difference (k) between the two oldest=15. Entering the Table on pp. 245-249 with these values of h and h, we deduce t=16.24. Thus the value of the required Annuity is equal to that of an Annuity on three lives of equal age 36.24. From the Table of Annuity Values on pp. 264-5, we have

"Difference" = -27

Deducting $\frac{4}{10}$ ths of this difference, the value of the required Annuity $a_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$ $_{36\cdot24}$

Note to Table on pp. 245-249.—For values of h>40, and of k<50; and for values of h<40, and of k>50; the tabular values of t on p. 249 are only computed for every tenth value of h, as the differences over this section of the Table change but slowly. The tabular value of t for intermediate values of t can, however, readily be determined by inspection. Thus for t=43, t=15, $t=48\cdot30$; and similarly for t=12, t=52, $t=51\cdot91$.

(3) JOINT ANNUITY ON FOUR LIVES. Required the value at 3 per cent. of a Joint Annuity of four lives aged 20, 30, 45 and 60.

Here the equal age x, appropriate to the three younger lives, can be obtained, as in the previous example, as $36^{\circ}24$. Deducting this value from the age of the fourth life, the value of $k=23^{\circ}76$. Entering the Table on pp. $250-25^{\circ}1$ with this value of k, we obtain the value of $t=11^{\circ}71$; and the equal age of the four lives is equal to x+t, or $47^{\circ}95$. From the Table of Annuity Values on pp. 266-267, we have

 $a_{47.9} \,_{47.9} \,_{47.9} \,_{47.9} = 8.031$ "Difference" = -29

and deducting half this difference, the value of the required Annuity $a_{47'95}$ $_{47'95}$ $_{47'95}$ $_{47'95}$ $_{47'95}$ $_{47'95}$ $_{47'95}$ $_{47'95}$

Note to Tables on pp. 254-275 inclusive.—In cases where the fractional portion of the Annuity is printed in **black type**, the integral portion, as set out in the column headed '0, is to be *diminished by unity*. Thus (p. 262) $a_{28\times 28\times 28\times 2}=16^{\circ}910$, &c., &c.

 $O^{M(5)}$

 $2^{\frac{1}{2}}$ PER CENT.

VALUES OF ANNUITIES

ON TWO, THREE, AND FOUR JOINT LIVES

OF EQUAL AGE.

VALUES OF ANNUITIES

ON TWO JOINT LIVES OF EQUAL AGE

 $O^{M(5)}$

14.00

21 PER CENT.

0					a_{xx}						Diff.	x
x	.0	.I	.5	.3	·4	•5	.6	.7	.8	.0	DIII.	
10 1 2 3 4	22 '111 21 '944 '773 '596 '414	.094 .927 .755 .578	.078 .910 .738 .560 .376	°061 °893 °720 °541 °358	.044 .876 .702 .523 .339	·028 ·859 ·685 ·505 ·320	°011 °841 °667 °487 °301	*994 *824 *649 *469 *282	.807 .807 .631 .450	'961 '790 '614 '432 '245	17 17 18 18	10 1 2 3 4
15 6 7 8 9	°226 °033 20 '834 '630 '419	·207 ·013 ·814 ·609 ·397	.187 .993 .793 .588 .376	'168 '973 '773 '567 '354	'149 '953 '752 '546 '333	'130 '934 '732 '525 '311	'110 '914 '712 '503 '289	*894 *691 *482 *268	°072 °874 °671 °461 °246	°052 °854 °650 °440 °225	19 20 20 21 22	15 6 7 8 9
20 1 2 3 4	203 19 981 753 518 278	'181 '958 '730 '494 '253	'159 '935 '706 '470 '229	136 1913 1683 1446 1204	.890 .659 .422	.636 .398	°070 ·844 ·612 ·374 ·130	.048 .821 .589 .350	'025 '799 '565 '326 '080	.003 .776 .542 .302 .056	22 23 24 24 25	20 1 2 3 4
25 6 7 8 9	°031 18 '779 °520 °255 17 '984	'006 '753 '494 '228 '956	'981 '727 '467 '201 '929	.701 .441 .174 .901	.675 .414 .147 .873	°905 °650 °388 °120 °846	·880 ·624 ·361 ·092 ·818	*855 *598 *335 *065 *790	·829 ·572 ·308 ·038 ·762	*804 *546 *282 *011 *735	25 26 27 27 28	25 6 7 8 9
30 1 2 3 4	707 *424 *135 16 *839 *539	.679 .395 .105 .809 .508	.650 .366 .076 .779 .478	.622 .337 .046 .749 .447	'594 '308 '017 '719 '416	.566 .280 .987 .689	.537 .251 .9 57 .659	.509 .222 .928 .629 .324	.481 .193 .898 .599 .293	°452 °164 °869 °569 °263	28 29 30 30 31	30 1 2 3 4
35 6 7 8 9	15 '920 '602 '280 14 '952	.888 .570 .247 .919	'170 '856 '538 '214 '886	138 825 505 182 852	'107 '793 '473 '149 '819	.761 .441 .116 .786	.045 .729 .409 .083 .753	.014 .697 .377 .050	.666 .344 .018	.634 .312 .985	31 32 32 33 33	35 6 7 8 9
40 1 2 3 4	'620 '283 13 '941 '596 '248	.586 .249 .907 .561 .213	.553 .215 .872 .526 .178	'519 '180 '838 '492 '142	.485 .146 .803 .457	'452 '112 '769 '422 '072	'418 '078 '734 '387 '037	384 044 700 352 002	*350 *009 *665 *318 *966	'317 '975 '631 '283 '931	34 34 35 35 35	40 1 2 3 4
45 6 7 8 9	12 ·896 ·541 ·184 11 ·825 ·464	.861 .505 .148 .789 .428	.825 .470 .112 .753 .392	.790 .434 .076 .717 .355	'754 '398 '040 '681 '319	.719 .363 .005 .645 .283	·683 ·327 ·969 ·608 ·247	.648 .291 .933 .572 .211	·612 ·255 ·897 ·536 ·174	.577 .220 .861 .500 .138	36 36 36 36 36	45 6 7 8 9
50 1 2 3 4	10 '740 377 014 9 '653	.066 .704 .341 .978 .617	.030 .667 .304 .942 .581	*993 *631 *268 *906 *545	.5957 .595 .232 .870 .509	'921 '559 '196 '834 '473	*885 *522 *159 * 797 *437	*849 *486 *123 * 761 *401	'812 '450 '087 '725 '365	'776 '413 '050 '689 '329	36 36 36 36 36	50 1 2 3 4

OM(5)

VALUES OF ANNUITIES
ON TWO JOINT LIVES OF EQUAL AGE

 $2^{\frac{1}{2}}_{\text{DERT}}$

03					a_{xx}						7:00	
$\begin{bmatrix} x \\ - \end{bmatrix}$.0	.I	.5	.3	. 4	.2	•6	.2	.8	.0	Diff.	$\begin{bmatrix} x \\ \end{bmatrix}$
55 6 7 8 9	9 293 8 935 580 227 7 878	*257 *900 *545 *192 *844	·221 ·864 ·509 ·157 ·809	°186 '829 '474 '122 '775	.150 .793 .439 .087 .740	'114 '758 '404 '053 '706	'078 '722 '368 '018 '672	.687 .333 .983 .637	.007 .651 .298 .948	'971 '616 '262 '913 '568	36 36 35 35 35 34	55 6 7 8
60 1 2 3 4	534 194 6 ·859 530 207 5 ·891	.500 .161 .826 .498 .175	'466 '127 '793 '465 '144 '829	'432 '094 '760 '433 '112 '798	.398 .060 .727 .401 .081	364 027 695 369 049	'33° '993 '662 '336 '017	•296 •960 •629 •304 •986 •675	262 926 596 272 954	'228 '893 '563 '239 '923 '613	34 34 33 32 32	60 1 2 3 4
65 6 7 8 9	5 ·891 ·582 ·281 4 ·987 ·702 ·425	552 252 959 674	'522 '222 '930 '647	'492 '193 '902 '619	.462 .163 .873 .591	'737 '432 '134 '845 '564	'401 '105 '816 '536	.371 .075 .788 .508	'341 '046 '759 '480	'311 '016 '731 '453	31 30 29 29 28	65 6 7 8 9
1 2 3 4 75	158 3 ·899 ·649 ·409	132 874 625 386	'106 '849 '601 '363	.080 .824 .577 .340	°054 °799 °553 °317 °091	'029 '774 '529 '294 '069	.003 .749 .505 .271	'977 '724 '481 '248	'951 '699 '457 '225	'925 '674 '433 '202 '980	26 25 24 23 22	1 2 3 4 75
6 7 8 9	2 '958 '747 '545 '353	'937 '727 '526 '335	.916 .707 .507 .316	*895 *686 *487 *298	*874 *666 *468 *280	*853 *646 *449 *262	·831 ·626 ·430 ·243 ·066	·810 ·606 ·411 ·225	'789 '585 '391 '207	'768 '565 '372 '188	21 20 19 18	6 7 8 9
1 2 3 4	1 '997 '834 '679 '533	.819 .664 .519	.803 .650 .505	°948 °788 °635 °492	.932 .772 .621 .478	'916 '757 '606 '464	·899 ·741 ·591 ·450	·883 ·726 ·577 ·436	·867 ·710 ·562 ·423	·850 ·695 ·548 ·409	17 16 16 15	1 2 3 4
85 6 7 8 9	395 *267 *146 *034 0 *929	°255 °135 °024 °919 °822	°243 °124 °013 °909 °813	'357 '231 '112 '003 '900 '804	344 219 101 992 890	'331 '207 '090 '982 '880	318 194 1971 1870	.305 .182 .068 .961 .860	'293 '170 '056 '950 '851	.158 .045 .940	13 12 11 11	85 6 7 8 9
90 1 2 3 4	742 •656 •582 •508	733 649 575 502	'725 '641 '567 '496	'716 '634 '560 '490	795 708 626 552 484	.787 .699 .619 .545 .478	.778 .690 .612 .538	.769 .682 .604 .530 .465	.760 .673 .597 .523 .459	751 665 589 515 453	9 9 7 7 6	90 1 2 3 4
95 6 7 8 9	'447 '384 '341 '306 '255	'441 '380 '338 '301 '249	°434 °375 °334 °296 °244	°428 °371 °331 °291 °238	'422 '367 '327 '286 '233	'416 '363 '324 '281 '227	'409 '358 '320 '275 '221	'403 '354 '317 '270 '216	397 350 313 265	'390 '345 '310 '260 '205	6 4 4 5 6	95 6 7 8 9
100	.108					154	144				9	100

VALUES OF ANNUITIES

 $O^{M(5)}$

ON THREE JOINT LIVES OF EQUAL AGE

 $2^{\frac{1}{2}}_{\bar{2}}^{\text{PER}}_{\text{CENT.}}$

\int_{x}					a_{xx}	x					D:00	
	.0	I.	.5	.3	.4	.2	.6	7	.8	.9	Diff.	x
10 1 2 3 4	19 '271 '121 18 '966 '805 '639	'256 '106 '950 '788 '622	'241 '090 '934 '772 '605	'226 '075 '918 '755 '588	'211 '059 '902 '739 '571	196 1944 1886 1722 1554	181 1028 1869 1705 1536	'166 '013 '853 '689 '519	'151 '997 '837 '672 '502	'136 '982 '821 '656 '485	15 16 16 17	10 1 2 3 4
15 6 7 8 9	'468 '291 '109 17 '921 '727	'450 '273 '090 '902 '707	'433 '255 '071 '882 '687	'415 '236 '053 '863 '667	397 218 034 843 647	.380 .200 .015 .824 .627	.362 .182 .996 .805	344 164 977 785 587	'326 '145 '959 '766 '567	309 127 940 746 547	18 18 19 19	15 6 7 8 9
20 1 2 3 4	527 321 110 16 892 669	.300 .088 .870 .646	'486 '279 '066 '847 '623	'465 '258 '045 '825 '600	'445 '237 '023 '803 '577	'424 '216 '001 '781 '554	'403 '194 '979 '758 '531	383 173 957 736 508	.362 .152 .936 .714 .485	'342 '131 '914 '691 '462	2 I 2 I 2 2 2 2 2 2	20 1 2 3 4
25 6 7 8 9	'439 '203 15 '961 '713 '459	'415 '179 '936 '688 '433	'392 '155 '911 '662 '407	.368 .130 .887 .637	345 106 862 611 355	'321 '082 '837 '586 '329	'297 '058 '812 '561 '303	.274 .034 .787 .535 .277	.250 .009 .763 .510	'227 '985 '738 '484 '225	24 24 25 25 26	25 6 7 8 9
30 1 2 3 4	'199 14 '933 '662 '384 '102	172 906 634 356	146 1879 1606 1328 1044	'119 '852 '579 '299 '016	.093 .825 .551 .271 .987	.066 .798 .523 .243 .958	'039 '770 '495 '215 '929	'013 '743 '467 '187 '900	.986 .716 .440 .158 .872	'960 '689 '412 '130 '843	27 27 28 28 29	30 1 2 3 4
35 6 7 8 9	13 ·814 ·521 ·223 12 ·920 ·613	'785 '491 '193 '889 '582	755 461 162 859	.726 .432 .132 .828 .520	.697 .402 .102 .797 .489	.668 .372 .072 .767 .458	.638 .342 .041 .736 .426	.609 .312 .011 .705 .395	·580 ·283 ·981 ·674 ·364	.550 .253 .950 .644 .333	29 30 30 31 31	35 6 7 8 9
40 1 2 3 4	302 11 987 669 347	'271 '955 '637 '315 '990	'239 '923 '605 '282 '958	.208 .892 .572 .250 .925	.176 .860 .540 .217 .892	.145 .828 .508 .185	.113 .796 .476 .153 .827	·082 ·764 ·444 ·120 · 794	.050 .733 .411 .088 .761	.019 .701 .379 .055 .729	3 ² 3 ² 3 ² 3 ³	40 1 2 3 4
45 6 7 8 9	10 .696 .368 .038 9 .708 .376	·663 ·335 ·005 ·675 ·343	.630 .302 .972 .642	.598 .269 .939 .608	·565 ·236 ·906 ·575 ·244	.532 .203 .873 .542	.499 .170 . 840 .509	.466 .137 .807 .476 .144	'434 '104 ' 774 '442 '111	'401 '071 ' 741 '409 '078	33 33 33 33 33	45 6 7 8 9
50 1 2 3 4	045 8 '715 '385 '057 7 '731	.012 .682 .352 .024 .699	'979 '649 '319 '992 '666	.616 .287 .959 .634	'913 '583 '254 '927 '602	·880 ·550 ·221 ·894 ·570	*847 *517 *188 *861 *537	.484 .484 .155 .829	'781 '451 '123 '796 '473	'748 '418 '090 '764 '440	33 33 33 33 32	50 1 2 3 4

VALUES OF ANNUITIES

OM(5)

ON THREE JOINT LIVES OF EQUAL AGE

 $2^{\frac{1}{2}}_{\text{CENT.}}^{\text{PER}}$

0		OI				31 7 135		20211			1	CENT
					a_{xxx}	9						
x			1	1	1	1		1		1	Diff.	x
	.0	.I	.5	.3	.4	.2	.6	.7	.8	.0		
55		.276	.211	312	.280	.210	.217	.182	*****	121	20	55
6	7 '408	·376 ·057	°344 °026	994	.963	.549	.899	.868	.836	.805	32 32	6
7	6 .773	742	711	.679	.648	.617	.586	555	523	492	31	7
8	.461	'430	'400	369	'338	.308	277	'246	215	185	31	8 9
9	154	124	.094	.064 .764	.034	.004	973	'943	.616	.883	30	60
60	5 ·853 ·557	·823 ·528	'794 '499	470	.735 .441	705	·675 ·384	.646 .355	326	°587	30 29	1
2	.268	240	211	.183	155	127	'098	.070	.042	,013	28	2
3	4 '985	957	.030	'902	.875	.847	.819	'792	.764	737	28	3
4	.709	.682	655	629	.602	575	*548	.221	495	468	27	4
65	*441 *181	'415 '156	.130	·363	'337 '080	°311	·285	°259	·233	953	26	65
7	3 '928	.904	.879	855	.830	.806	782	757	733	708	24	7
8	.684	.660	.637	.613	.290	.266	542	.219	495	472	24	8
9	•448	425	403	.380	'358	335	'312	'290	*267	245	23	9
70	222	'200 '982	'178	.126	.010 .134	.899	·091	.069 .857	°047 '836	°025	22	70
2	°003 2 °794	774	754	°940 °734	714	.694	.674	.654	634	614	21	2
3	594	575	556	537	.218	'499	479	.460	°441	422	19	3
4	'403	.382	'367	'348	.330	.315	'294	.276	257	239	18	4
75 6	'221	'204	.186	.169	152	135	117	,100	.083	.065	17	75
7	°048 1 °884	.868	°015	.837	*982 *822	'966	'950 '790	'933 '775	'917	'900	16 16	6 7
8	.728	'713	.699	.684	.669	.655	.640	625	.610	596	15	8
9	.281	.267	553	539	.25	.213	'498	.484	470	456	14	9
80	442	'429	416	'403	.390	377	364	351	338	325	13	80
1 2	'312	·300	·288	²⁷⁵	·263	133	'239	110	098	°202	12	$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$
3	075	.064	.054	.043	.032	022	OII.	.000	.089	'979	11	3
4	0 '968	'958	'948	'938	.928	.918	.908	.898	.888	.878	10	4
85	.868	.859	.850	.840	.831	.822	.813	.804	'794	.785	9	85
8 7	·776	.767 .682	759	.75° .666	.742 .658	.733 .651	·724 ·643	·716	·707	.619	9 8	6
8	.611	.604	.596	.589	.285	575	.567	.260	553	545	7	8
9	.538	.231	524	.218	.211	.204	'497	°490	.484	477	7	9
90	. 470	.464	458	452	.446	.440	°434	.428	'422	.416	6	90
1 2	'410	·404 ·348	399	393	:387	.382	376	370	364	359	6	1 2
3	353 305	340	343	339	'334 '286	'329 '281	·324 ·276	'319 '271	'315 '267	262	5 5	3
4	·257	.523	'249	1246	'242	.238	234	230	227	.223	4	4
95	'219	'215	'211	.207	'203	.199	195	.101	.184	.183	4	95
7	179	176	174	171	.169	.166	.163	,191	.128	.126	3	6 7
8	*153	132	149	148	146	144	'142 '118	1140	.113	.132	3	8
9	107	104	102	.099	.096	.094	.091	.088	.082	.083	3	9
100	.080	.076	.071	.067	.062	.028	'054	·049	.045	'040	. 4	100
1	. 036	•••			•••			•••			• • • •	1
-												

VALUES OF ANNUITIES

OM(5)

ON FOUR JOINT LIVES OF EQUAL AGE

 $2^{\frac{1}{2}}$ PER

x					a_{xxx}	v					Diff.	<i>m</i>
	.0	.ı	.5	.3	*4	.2	.6	.7	.8	.0		<i>x</i>
10 1 2 3 4	17 ·126 16 ·991 ·853 ·708 ·558	°113 °977 °839 °693 °543	°999 °963 °824 °678 °527	.086 .950 .810 .663	°072 °936 °795 °648 °496	°059 °922 °781 °633 °481	°045 °908 °766 °618 °465	°032 °894 °752 °603 °450	'018 '881 '737 '588 '434	'005 '867 '723 '573 '419	14 14 15 15	10 1 2 3 4
15 6 7 8 9	'403 '243 '077 15 '906 '729	387 226 660 888	°371 °210 °043 °871 °692	355 193 026 853 674	*339 *177 *009 *835 *655	'323 '160 '992 '818 '637	'307 '143 '974 '800 '619	*291 *127 *957 *782 *600	.275 .110 .940 .764 .582	°259 °94 '923 °747 °563	16 17 17 18 18	15 6 7 8 9
20 1 2 3 4	545 356 162 14 961 755	'526 '337 '142 '940 '734	'507 '317 '122 '920 '712	·488 ·298 ·102 ·899 ·691	*469 *278 *082 *879 *670	°451 °259 °062 °858 °649	'432 '240 '041 '837 '627	°413 °220 °021 '817 '606	394 201 001 796 585	375 181 981 776 563	19 19 20 21 21	20 1 2 3 4
25 6 7 8 9	'542 '324 '099 13 '868 '633	·520 ·302 ·076 ·845 ·609	°498 °279 °053 °821 °584	°477 °257 °030 °798 °560	'455 '234 '007 '774 '536	'433 '212 '984 '751 '512	°411 °189 °960 °727 °487	389 167 937 704 463	'368 '144 '914 '680 '439	346 122 891 657 414	22 23 23 24 24	25 6 7 8 9
30 1 2 3 4	390 143 12 890 631 368	.365 .118 .864 .605	°341 °092 '838 '578 '314	°316 °067 '812 °552 °288	°291 °042 °786 °526 °261	°267 °017 °761 °500 °234	°242 °991 °735 °473 °207	'217 '966 '709 '447 '180	'192 '941 '683 '421 '154	168 915 657 394	25 25 26 26 27	30 1 2 3 4
35 6 7 8 9	11 ·826 ·548 ·266 10 ·979	.073 .798 .520 .237 .950	°045 '770 '492 '209 '921	°018 °743 °463 °180 °892	'990 '715 '435 '151 '863	.687 .407 .123 .834	°936 °659 °379 °094 °805	.631 .351 .065 .776	·881 ·604 ·322 ·036 ·747	*853 *576 *294 *008 *718	27 28 28 29 29	35 6 7 8 9
40 1 2 3 4	.200 .300 .100 .200	.660 .366 .070 .771 .470	.630 .337 .040 .741 .439	'601 '307 '010 '711 '409	°572 °278 ° 980 °681 °379	'543 '248 '951 '651 '349	'513 '218 '921 '620 '318	*484 *189 * 891 *590 *288	'455 '159 '861 '560 '258	'425 '130 '831 '530 '227	29 30 30 30 30	40 1 2 3 4
45 6 7 8 9	197 8 ·894 ·589 ·286 7 ·980	°167 °864 °559 °255 °950	°136 °833 °528 °225 °919	°106 °803 °498 °194 °889	.076 .772 .468 .164 .858	°046 °742 °438 °133 °828	'015 '711 '407 '102 '798	.681 .377 .072 .767	'955 '650 '347 '041 '737	'924 '620 '316 '011 '706	30 31 30 31 30	45 6 7 8 9
50 1 2 3 4	6.774 6.774 478	'646 '343 '042 '744 '449	'615 '313 '012 '715 '420	.585 .283 .983 .685 .390	'555 '253 '953 '656 '361	'525 '223 '923 '626 '332	.494 .192 .893 .596	.464 °162 '863 °567 °274	'434 '132 '834 '537 '244	'403 '102 '804 '508 '215	30 30 30 30 29	50 1 2 3 4

VALUES OF ANNUITIES

 $O^{M(5)}$

ON FOUR JOINT LIVES OF EQUAL AGE

21 PER 2 CENT.

x					a_{xxx}	v					Diff.	$\begin{bmatrix} x \end{bmatrix}$
	.0	.ı	.5	.3	·4	.2	.6	.7	.8	.0	17111,	
55 6 7 8 9	6 ·186 5 ·896 ·614 ·335 ·061	*157 *868 *586 *308 *034	°128 °840 °558 °280	°099 °811 °530 °253 °981	'070 '783 '502 '225 '954	'041 '755 '475 '198	'012 '727 '447 '171	.699 .419 .143	'954 '670 '391 '116 '847	'925 '642 '363 '088 '820	29 28 28 27 27	55 6 7 8
60 1 2 3 4	4 '793 '532 '277 '029 3 '788	767 507 252 005	.741 .481 .227 .981	715 456 203 957	·689 ·430 ·178 ·933 ·695	.663 .405 .153 .909	636 379 128 884 648	.610 .354 .103 .860	'584 '328 '079 '836	'558 '303 '054 '812 '578	26 26 25 24 23	60 1 2 3 4
65 6 7 8 9	°555 °330 °112 2 °903 °702	*533 *308 *091 *883 *683	'510 '286 '070 '863 '664	°488 °265 °049 °843 °644	*465 *243 *028 *823 *625	'443 '221 '008 '803 '606	'420 '199 '987 '782 '587	*398 *177 *966 *762 *568	'375 '156 '945 '742 '548	'353 '134 '924 '722 '529	23 22 21 20 19	65 6 7 8 9
70 1 2 3 4	°510 °326 °150 1 °983 °824	'492 '308 '133 '967 '809	'473 '291 '117 '951 '794	°455 °273 °100 °935 °779	°436 °256 °083 °919 °764	'418 '238 '067 '904 '749	°400 °220 °050 °888 °734	*381 *203 *033 *872 *719	'363 '185 '016 '856 '704	'344 '168 '000 '840 '689	18 18 17 16	70 1 2 3 4
75 6 7 8 9	°674 °532 °397 °271 °152	.660 .519 .384 .259 .141	'646 '505 '372 '247 '130	'631 '492 '359 '235 '119	'617 '478 '347 '223 '108	'603 '465 '334 '212 '097	.589 .451 .321 .200	575 438 309 188	'560 '424 '296 '176 '063	'546 '411 '284 '164 '052	14 14 13 12	75 6 7 8 9
80 1 2 3 4	°041 ° '937 °841 °751 °667	.031 .927 .832 .743 .659	*020 *918 *823 *734 *652	°010 °908 °814 °726 °644	.899 .805 .717 .636	'989 '889 '796 '799 '629	.879 .879 .787 .701 .621	.870 .778 .692 .613	'958 '860 '769 '684 '605	'947 '851 '760 '675 '598	10 10 9 8 8	80 1 2 3 4
85 6 7 8 9	*590 *519 *454 *395 *341	.583 .513 .448 .390 .336	'576 '506 '442 '384 '331	'569 '500 '436 '379 '326	.562 .493 .430 .373 .321	'555 '487 '425 '368 '316	'547 '480 '419 '363 '311	°540 °474 °413 °357 °306	*533 *467 *407 *352 *301	*526 *461 *401 *346 *296	7 7 6 5 5	85 6 7 8 9
90 1 2 3 4	*291 *248 *207 *174 *141	·287 ·244 ·204 ·171 ·139	'282 '240 '200 '167 '136	'278 '236 '197 '164 '134	*274 *232 *194 *161 *131	'270 '228 '191 '158 '129	'265 '223 '187 '154 '127	°261 °219 °184 °151 °124	'257 '215 '181 '148 '122	'252 '211 '177 '144 '119	4 4 3 3 2	90 1 2 3 4
95 6 7 8 9	°090 °074 °064 °048	°114 °088 °073 °062 °047	°112 °087 °072 °061 °045	.085 .021 .029 .044	*106 *084 *070 *058 *042	°104 °082 °069 °056 °041	*101 *080 *068 *054 *039	.098 .079 .067 .053 .038	°095 °077 °066 °051 °036	°093 °076 °065 °050 °035	3 2 1 2 2	95 6 7 8 9
100	*033		*029		*025 		*020				2	100



 $O^{M(5)}$

3 PER CENT.

VALUES OF ANNUITIES

ON TWO, THREE, AND FOUR JOINT LIVES

OF EQUAL AGE.

VALUES OF ANNUITIES

OM(5) ON TWO JOINT LIVES OF EQUAL AGE

x					$alpha_{xx}$						Diff.	x
	·0	.I	.2	-3	*4	°5	.6	.7	.8	.0	———	
10 1 2 3 4	20 '247 '113 19 '974 '831 '682	·234 ·099 ·960 ·816 ·667	'220 '085 '945 '801 '651	°207 °071 °931 °786 °636	193 1957 1917 1771 1620	°180 °044 °903 °757 °605	°167 °030 °888 °742 °590	153 1016 1874 1727 1574	'140 '002 '860 '712 '559	°126 °988 °845 °697 °543	13 14 14 15	10 1 2 3 4
15 6 7 8 9	*528 *369 *205 *036 18 *861	°512 °353 °188 °019 °843	°496 °336 °171 °001 °825	·480 ·320 ·154 ·984 ·807	'464 '3°3 '137 '966 '789	.449 .287 .121 .949 .771	'433 '271 '104 '931 '752	°417 °254 °087 '914 '734	°401 °238 °070 '896 '716	*385 *221 *053 * 879 *698	16 16 17 18	15 6 7 8 9
20 1 2 3 4	.680 .494 .302 .104 17 .901	°661 °475 °282 °084 °880	°643 °456 °262 °063 °859	°624 °436 °243 °043 °838	'606 '417 '223 '023 '817	.587 .398 .203 .003	*568 *379 *183 *982 *775	550 360 163 962 754	'531 '340 '144 '942 '733	'513 '321 '124 '921 '712	19 19 20 20 21	20 1 2 3 4
25 6 7 8 9	°691 °476 °254 °026 16 °793	.670 .454 .231 .003 .769	.648 .432 .208 .979 .745	°627 °409 °186 °956 °721	.605 .387 .163 .933 .697	.584 .365 .140 .910	°562 °343 °117 °886 °649	'541 '321 '094 '863 '625	'519 '298 '072 '840 '601	'498 '276 '049 '816 '577	22 22 23 23 24	25 6 7 8 9
30 1 2 3 4	°553 °3°7 °055 15 °797 °533	.528 .282 .029 .771 .506	'504 '257 '003 '744 '479	'479 '231 '978 '718 '452	*455 *206 *952 *691 *425	'430 '181 '926 '665 '398	'405 '156 '900 '639	*381 *131 *874 *612 *344	356 105 849 586	'332 '080 ' 823 '559 '290	25 25 26 26 26	30 1 2 3 4
35 6 7 8. 9	°263 14 °988 °706 °419 °127	*236 *960 *677 *390 *097	'208 '932 '649 '361 '068	'181 '903 '620 '331 '038	.153 .875 .591 .302 .008	*126 *847 *563 *273 *979	*098 *819 *534 *244 *949	.791 .505 .215	.762 .476 .185 .889	'734 '448 '156 '860	28 28 29 29 30	35 6 7 8 9
40 1 2 3 4	13 '830 '528 '221 12 '910 '594	*800 *497 *190 *878 *562	.770 .467 .159 .847 .530	'739 '436 '128 '815 '498	.709 .405 .097 .784 .466	.679 .375 .066 .752 .435	°649 °344 °034 °720 °403	.619 .313 .003 .689	.588 .282 .972 .657 .339	.558 .252 .941 .626 .307	30 31 31 32 32	40 1 2 3 4
45 6 7 8 9	°275 11 '952 °626 °297 10 '966	°243 °919 °593 °264 '933	.210 .887 .560 .231 .899	.178 .854 .527 .198 .866	146 822 494 165 832	789 462 132 799	.081 .756 .429 .098 .766	°049 '724 '396 '065 '732	.017 .691 .363 .032 .699	.659 .330 .999 .665	32 33 33 33 33	45 6 7 8 9
50 1 2 3 4	°632 °298 9 °962 °625 °289	'599 '264 '928 '591 '256	*565 *231 *895 *558 *222	.532 .197 .861 .524 .189	'498 '164 '827 '491 '155	'465 '130 '794 '457 '122	'432 '096 '760 '423 '088	*398 *063 *726 *390 *055	'365 '029 '692 '356 '021	'331 '996 '659 '323 '988	33 34 34 34 34 34	50 1 2 3 4

 $\mathbf{O}^{\mathbf{M}(5)}$

VALUES OF ANNUITIES
ON TWO JOINT LIVES OF EQUAL AGE

					a_{xx}							
x	.0	.I	.5	.3	·4	•5	.6	.7	٠8	.0	Diff.	x
55	8 '954	*92I	.887	*854	*820	.787	753	•720	•686	.653	34	55
6 7	.619	•586	.552	'519	°485	452	.419	.385	'352	*318	33	6 7
8	²⁸⁵ 7 954	°252	'219 '888	.826 .826	.153 .823	°120	*086 *757	·053	.692	.659	33 33	8
9	·626	*593	.261	.28	*496	*463	.430	*398	'365	333	- 33	9
60	°300 6 °979	°268	°236	°204 °884	*172 *852	*140 *820	.788	.075 .756	°725	.693	32 32	60
2 3	. 661	.630	'599	.267	*536	505	474	°443	411	.380	31	3
4	°349 °041	.318	·287	°257	'226 '92I	.891	·164	·133 ·830	·103	'072 '770	30	4
65	5 '740	.710	·681	.651	.622	.292	.262	*533	503	474	30	65
6 7	*444 *156	°415 °128	.386	'358 '071	°329	*300 *015	·271	*242 *959	'214	'185 '902	29 28	6 7
8 9	4 '874	.847	819	'792	.764	'737	.709	.682	·654 ·386	627	28	8 9
70	*599 *333	'57 ²	°546	.252	°493	°466	°439	'413	126	.360	27 26	70
.1	'074	049	.024	'999	'974	949	'924	.899	.874	.849	25	1
3	3 ·824 ·582	*800 *559	.776 .536	'751 '512	'727 '489	'703 '466	'679 '443	*655 *420	*630 *396	°606	24	3
4	-*350	.328	305	283	260	•238	.519	193	171	148	22	4
75 6	1126	'105 '890	.870	.849	*829	*808	'997 '787	'976	'954	'933 '726	22	75 6
7	.705	.685	·66 6	.646	·626	.607	.587	.567	547	.28	20	7
8	.200 .320	'489 '302	·470 ·284	452	'433 '249	'414 '231	°395 °213	·376	358	'339 '160	19	8 9
80	142	125	.108	100.	.074	•057	.040	.023	°006	.080	17	80
1 2	1 '972	'956 '797	.940 .782	'924 '766	'908 '751	·892 ·736	·876	·860 ·706	°844	·828 ·675	16 15	1 2
3	.000	'646.	.631	617	.602	:588	574	559	545	.230	14	3
4	'516	503	'489	476	*462	449	435	422	*408	395	·14	4
85	°381	'368 '242	356	343	'330 '206	'318	305	°292	°279	267	13	85
7 8	135	124	1113	102	*091.	*080	.068 .062	.057	°046	°035	11	7 8
9	0,051	.011	.003	.892	.882	.873	.863	·952 ·853	.843	.834	10	9
90	.824	·S15	.806	:798	.789	.780	'77I	.762	754	745	. 9	90
1 2	'736 '651	.72S .644	°636	629	·702 ·622	.694 .615	·685	.677	*668 *593	.660 .585	. 9	1 2
3 4	578	571	'563	.556	°549	*542	*534 *468	527	.20	.213	7	3 4
95	'5°5	°499	493	°487	*481 *419	°475	400	'462 '401	'456 '394	°450	. 6	95
6 7	'382	*378	*373	'369	°365	361	.356	352	'348	*343	4	6
8	339	*336 *299	°332	*329 *289	3 ² 5 28 ₄	°322	'318 '273	'315 '268	°311	°308	4 5	8
9	253	*248	*242	°237	*231	.226	*220	*215	*209	*204	6	9
100	.108	.189	.180	 171	·162		*I44			117	. 9	100
L												

VALUES OF ANNUITIES

OM(5)

ON THREE JOINT LIVES OF EQUAL AGE

3 PER CENT

x					a_{xxs}	r					Diff.	x
.0	.0	.I	.5	.3	.4	.2	.6	.7	.8	.0		
10 1 2 3 4	17 '808 '684 '556 '422 '284	'796 '671 '543 '408	'783 '658 '529 '394 '255	771 646 516 381 241	.758 .633 .502 .367 .226	'746 '620 '489 '353 '212	'734 '607 '476 '339 '198	721 594 462 325 183	'709 '582 '449 '312 '169	°696 °569 °435 °298 °154	12 13 13 14	10 1 2 3 4
15 6 7 8 9	140 16 992 838 679	°125 °977 °822 °663 °497	1110 1961 1806 1646 1480	°096 °946 °790 °630 °463	*930 *774 *613 *446	°066 °915 °759 °597 °429	'051 '900 '743 '580 '412	.036 .884 .727 .564 .395	.022 .869 .711 .547 .378	.853 .695 .531	15 16 17 17	15 6 7 8 9
20 1 2 3 4	344 168 15 986 799 605	·326 ·150 ·967 ·780 ·585	'309 '132 '949 '760 '565	°291 °113 °930 °741 °545	°274 °095 °911 °721 °525	·256 ·077 ·893 ·702 ·505	°238 °059 '874 '683 '485	°221 °041 °855 °663 °465	°203 °022 °836 °644 °445	°186 °004 °818 °624 °425	18 18 19 19	20 1 2 3 4
25 6 7 8 9	14- 989 772 549	385 180 967 750 526	°364 °159 °946 °727 °503	'344 '137 '924 '705 '480	'323 '116 '902 '683 '457	'303 '095 '881 '661 '434	°283 °074 °859 °638 °411	°262 °053 °837 °616 °388	°242 °031 '815 °594 °365	'221 '010 '794 '571 '342	20 21 22 22 22 .23	25 6 7 8 9
30 1 2 3 4	*319 *085 13 *844 *597 *345	°296 °061 °819 °572 °319	°272 °037 °795 °547 °293	°249 °013 °770 °521 °268	*225 *989 *745 *496 *242	'202 '965 '721 '471 '216	'179 '940 '696 '446 '190	'155 '916 '671 '421 '164	*132 *892 *646 *395 *139	'108 '868 '622 '370 '113	23 24 25 25 26	30 1 2 3 4
35 6 7 8 9	°087 12 °824 °555 °282 °004	.061 .797 .528 .254 .976	°034 °770 °500 °226 °948	'008 '743 '473 '199 '919	'982 '716 '446 '171 '891	'956 '690 '419 '143 '863	.663 .391 .115 .835	.636 .364 .087 .807	·877 ·609 ·337 ·060 ·778	*850 *582 *309 *032 *750	26 27 27 28 28	35 6 7 8 9
40 1 2 3 4	11 °722 °435 °143 10 °849 °551	.693 .406 .114 .819	.665 .377 .084 .789 .491	°636 °347 °055 °760 °461	.607 .318 .025 .730 .431	'579 '289 ' 996 '700 '401	°550 °260 °967 °670 °370	·521 ·231 ·937 ·640 ·340	°492 °201 ° 908 °611 °310	°464 °172 '878 °581 °280	29 29 29 30 30	40 1 2 3 4
45 6 7 8 9	250 9 947 642 335 027	°220 °917 °611 °304 °996	.189 .886 .581 .273	°159 °856 °550 °243 '934	*825 *519 *212 *903	'099 '795 '489 '181 '873	.068 .764 .458 .150 .842	'038 '734 '427 '119 '811	.008 .703 .396 .089	977 673 366 058 749	30 31 31 31	45 6 7 8 9
50 1 2 3 4	8 ·718 ·409 ·100 7 ·791 ·485	.687 .378 .069 .760 .455	.656 .347 .038 .730 .424	.625 .316 .007 .699	594 285 976 669	°564 °255 °946 °638 °333	°533 °224 '915 °607 '302	*502 *193 *884 *577 *272	'471 '162 '8 53 '546	'440 '131 '822 '516 '211	31 31 31 31	50 1 2 3 4

VALUES OF ANNUITIES

 $O^{M(5)}$

ON THREE JOINT LIVES OF EQUAL AGE

3 PER CENT.

					α_{xx}	r						
x		<u> </u>	1	1		1	1 .		1		Diff.	x
	.0	.I	.5	.3	*4	.5	.6	.7	.8	.0		
55	7 '130	150	.110	.089	.059	*029	.998	.968	.938	.907	30	55
6	6 .877	.84.7	.817	1787	757	1728	.698	.668	.638	.608	30	6
8	.578	548	519	489	460	'430	'400	'37 I	'341	312	. 30	7
9	5 '990	°253	932	904	·165	°136	817	.788	.760	'019	. 29	8
60	702	.674	.645	.617	.589	.261	532	.504	.476	447	28	60
1	'419	.391	364	336	'308	.581	*253	.225	197	170	28	1
3	4 .871	·115	818	°061	.765	739	979	.686	. 659	·898 ·633	, 27	2 3
4	.606	.280	3554	528	.502	477	451	425	.399	373	. 27.	4
65	*347	'322	297	272	*247	222	.196	171	146	.151	25	65
6 7	3 852	.072 .828	°047	°023	.998	974	°950	·925 ·687	.00I	.876	24	6 7
8	616	593	570	•547	524	'734 '502	479	456	'663 '433	640	24	8
9	'387	*365	'343	'321	299	277	255	·233	211	.189	22	9
70	167	•146	125	103	.082	.061	.040	.019	'997	.976	21	70
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	2 '955 '751	'935 -'732	712	·894 ·693	·873 ·673		·833 ·634	·812	.792 .595	.271 .276	20 20	1 2
3	.556	*537	.219	.200	.481	:463	444	425	406	388	19	3
4	•369	.321	333	.316	•298	*280	.262	*244	'227	.500	18	4
75 6	.033	°174	'157 '990	'140 '974	·123	·107	*090 * 925	'073 '909	°056	·039	17 16	75 6
7	1 .861	·846	.830	.815	·800	·785	769	754	739	723	15	7
8	'708	694	679	.665	.650	.636	621	.607	°592	578	.12	8
9	'563 '427	'549 '414	536	·522	·509	495	*481	·468	454	*441	14	9
80	299	287	'40I '275	263	·376 ·251	·363	°350	'337 '214	'325 '202	'312 '190	. 13	80 1
2	178	167	.122	144	.133	122	.110	.099	°088	.076	· I I	2
$\begin{vmatrix} 3 \\ 4 \end{vmatrix}$	°065 0 °960	°055	°044	°034	*023 *920	.013	'002 '901	.891	.881	'97 1	11	3 4
85	861	852	.843	.834	.825	816	.806	797	.788	779	. 9	85
6	*770	.762	753	745	.736	728	.719	.711	'702	694	. , 9	6
7 8	.685 .606	67.7	·669	.661	653	·646	.638	.630	622	614	. 8	7 8
9	534	.599 .527	592 521	.584 .514	*577 *507	.201	°563 °494	.556 .487	*548 *480	'541 '474	. 7	9
90	•467	·461	455	·449	·443	.438	'432	.426	·420	414	. 6	90
1 2	·408	402	397	391	*385	.380	374	368	.362	357	6	1
3	*351 *303	°346	'34I '293	337 289	*332 *284	327 279	°322	'317 '269	°313	°308 °260	. 5 5	2 3
4	·255	'251	1248	'244	'240	237	233	'229	225	222	. 4	4
95	'218	214	'210	*206	1202	198	194	190	.186	182	4	95
6 7	°178 °152	175 150	173 148	170 147	°168	°165	162 141	139	°157	136°	3 2	6 7
8	134	131	128	°126	123	120	1117	114	112	.100	3	8
9	.109	.103	.101	.098	.092	.093	.000	'087	.084	·082	3	9
100	•079 •036	.075	.040	°066	.062	.058	°053	.049	°045	*040	4	100
	030	•••	***		•••	***	•••	•••	•••	•••	•••	1

 $O^{M(5)}$

VALUES OF ANNUITIES

ON FOUR JOINT LIVES OF EQUAL AGE

$ _{x}$					a_{xxx}	v					Dıff.	x
	.0	ı,	.5	*3	*4	.2	•6	.7	.8	.0	.DIII.	
10 1 2 3 4	15 °936 °823 °706 °584 °456	*925 *811 *694 *571 *443	'913 '800 '682 '558 '430	'902 '788 '669 '546 '416	·891 ·776 ·657 ·533 ·403	:880 :765 :645 :520 :390	·868 ·753 ·633 ·507 ·377	·857 ·741 ·621 ·494 ·364	.846 .729 .608 .482 .350	*834 *718 *596 *469 *337	11 12 12 13	10 1 2 3 4
15 6 7 8 9	°324 °187 °045 14 °898 °745	'310 '173 '030 '883 '729	°297 °159 °016 °867 '713	°283 °144 °001 °852 °697	*130 *986 *837 *681	°256 °116 °972 °822 °666	°242 °102 °957 °806 °650	.228 .088 .942 .791 .634	°214 °073 '927 '776 '618	°201 °059 '913 °760 °602	14 14 15 15	15 6 7 8 9
20 1 2 3 4	°586 422 °253 °078 13 °896	°570 °405 °236 °060 °877	553 388 218 042 859	°537 °371 °201 °023 °840	°520 °354 °183 °005 °821	'504 '338 '166 '987 '803	°488 °321 °148 °969 °784	°471 °3°4 °131 °951 °765	'455 '287 '113 '932 '746	°438 °270 °096 °914 °728	16 17 18 18	20 1 2 3 4
25 6 7 8 9	'709 '517 '318 '113 12 '903	*690 *497 *298 *092 *881	'671 '477 '277 '071 '860	°651 °457 °257 °050 °838	'632 '437 '236 '029 '817	'613 '418 '216 '008 '795	594 398 195 987 773	575 378 175 966 752	'555 '358 '154 '945 '73°	.536 .338 .134 .924 .709	19 20 21 21 22	25 6 7 8 9
30 1 2 3 4	*687 *466 *239 *005	.665 .443 .216 .981 .743	.643 .421 .192 .957 .718	'621 '398 '169 '934 '694	375 375 145 910 670	'577 '353 '122 '886 '646	'554 '330 '099 '862	*532 *307 *075 *838 *597	'510 '284 '052 '815 '573	'488 '262 '028 ' 791 '548	22 23 23 24 24	30 1 2 3 4
35 6 7 8 9	'524 '276 '022 10 '764 '502	'499 '251 '996 '738 '475	'474 '225 '970 '712 '449	°450 °200 '945 °685 °422	*425 *174 *919 *659 *396	'400 '149 '893 '633 '369	'375 '124 '867 '607 '342	°350 °098 '841 °581 °316	*326 *973 *816 *554 *289	'301 '047 '790 '528 '263	.25 25 26 26 27	35 6 7 8 9
40 1 2 3 4	°236 9 °966 °692 °416 °137	°209 °939 °664 °388 °109	'182 '911 '637 '360 '081	*155 *884 *609 *332 *052	*128 *856 *582 *304 *024	*101 *829 *554 *277 *996	'074 '802 '526 '249 '968	.047 .774 .499 .221 .940	'020 '747 '471 '193 '911	'993 '719 '444 '165 '883	27 27 28 28 28	40 1 2 3 4
45 6 7 8 9	8 ·855 ·572 ·287 ·002 7 ·716	*827 *544 *259 * 973 *687	'798 '515 '230 '945 '659	'770 '487 '202 '916 '630	'742 '458 '173 '888 '602	'714 '430 '145 '859 '573	.685 .401 .116 .830 .544	.657 .373 .088 .802 .516	*629 *344 *059 * 773 *487	*600 *316 *031 *745 *459	28 29 29 29 29	45 6 7 8 9
50 1 2 3 4	430 144 6 860 577 296	'401 '116 '832 '549 '268	°373 °087 °803 °521 °241	'344 '059 '775 '493 '213	*316 *030 *747 *465 *185	'287 '002 '719 '437 '158	°258 '974 '690 '408 '130	'230 '945 '662 '380 '102	°201 °917 °634 °352 °974	*173 *888 *605 *324 *047	29 28 28 28 28 28	50 1 2 3 4

VALUES OF ANNUITIES

 $O^{M(5)}$

ON FOUR JOINT LIVES OF EQUAL AGE

3 PER CENT.

												CENT.
					a_{xxx}	r						
x			(20000	1	1		1		Diff.	x
	.0	.I	.5	'3	°4	°5	.6	.7	.8	.0		
55 6	6 .010	'992	964	937	.606	·882	.854	.827	'799	772	28 27	55 6
7	5 '744 '473	.446	.690 .420	'663 '393	°636	*340	·581	°554 °286	°527	°500	27	7
8	206	.180	.123	127	.10I	.075	.048	'022	.006	.060	26	8
9	4 '943	.012	.892	.866	*840	.812	*789	.763	'737	.412	26	9
60	.686	.661	.636	.610	.285	.560	535	.210	484	459	25	60
2	°434 °189	°410	.385	°361	'336 '093	·312	°287	°263	*238 * 997	'214	25 24	2
3	3 '949	926	902	.879	*856	.833	.809	.786	.763	739	23	3
4	.716	.693	.671	.648	.626	.603	.280	.228	535	.213	23	4
65	°490	·468	.446	425	403	.381	359	337	.316	294	22	65
7	°272	'251 '041	.020	°209	'188	'167	°145	'124 '918	.808	*082 * 877	2 I 20	7
8	2 .857	.837	.818	.798	779	759	739	720	.700	.681	20	8
9	.661	.642	.623	.605	.586	.567	.548	.529	.211	°492	19	9
70	473	°455	437	419	401	*384	*366	*348	.330	312	18	70
1 2	*294	277	*260 *089	242	225	208	.101	174	.126	139	17	$\begin{bmatrix} 1 \\ 2 \end{bmatrix}$
3	1 '958	'106 '943	*927	'073 '912	°056	.040 .881	.865	.850	.834	974	16	3
4	*803	.788	773	759	744	.729	714	.699	.685	.670	15	4
75	.655	·641	.627	.613	*599	.585	.571	°557	*543	'529	14	75
6 7	*515	.202	*489	475	°462	449	*436	423	409	*396	13	6 7
8	*383 *259	'37 I '247	°358 °236	346	333°212	'32I '20I	.309	°296	°284	°271	12	8
9	142	131	120	109	.098	.087	.076	.065	054	043	II	9
80	.032	.022	.011	.001	.001	.081	.970	.060	.020	.939	10	80
1	0 '929	920	.010	.001	168	.885	.872	.863	.853	.844	10	$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$
3	·834 ·745	·825 ·737	°816	·807	. 798 . 712	°790	.781	·772 ·687	°763	.670	9	3
4	662	.654	.647	.639	632	.624	.619	.600	.601	594	8	4
85	•586	579	572	.565	.558	.221	*544	*537	.530	523	7	85
6	.216	.210	.203	'497	.490	'484	477	471	.464	458	7	6
7 8	°451	445	439	433	'427	°422 °366	.416	410	'404	398	6 5	7 8
9	*39 ²	'387 '334	381	376	·371 ·319	314	360	355	°350	344	5	9
90	289	285	281	.276	.272	•268	.264	*260	255	251	4	90
1	*247	*243	239	235	*231	`227	222	'218	214	210	4	1
2 3	206	203	199	.196	193	.100	.186	183	180	176	3	2 3
4	'173 '140	170	135	133	,130	157	153	123	147	1143	3 2	4
95	,119	113	.111	.108	.106	.103	.100	'098	°095	.093	3	95
6	.000	.088	.087	.082	.084	.085	.080	.079	*077	.076	2	6
7 8	074	.073	072	'071	.070	.069	.068	.067	.066	.065	I	8
9	°064	°062	'061	°059	°058	.026	039	·053	.036	.032	2 2	9
100	.033	.031	.029	027	.022	023	.020	.018	.019	014	2	100
1	012										***	1
						-						



 $O^{M(5)}$

 $3\frac{1}{2}$ PER CENT.

VALUES OF ANNUITIES

ON TWO, THREE, AND FOUR JOINT LIVES

OF EQUAL AGE.

VALUES OF ANNUITIES

 $O^{M(5)}$

ON TWO JOINT LIVES OF EQUAL AGE

					Chex							
x	.0	I.	.5	.3	*4 .	. 5	.6	.7	.8	.9	Diff.	x
10 1 2 3 4	18 '634 '524 '412 '294 '172	°623 °513 °400 °282 °159	'612 '502 '388 '270 '147	'601 '490 '377 '257	°590 °479 °365 °245 °121	'579 '468 '353 '233 '109	·568 ·457 ·341 ·221 ·096	°557 °446 °329 °209 °083	'546 '434 '318 '196 '070	535 423 306 184 058	11 11 12 12	10 1 2 3 4
15 6 7 8 9	°045 17 °914 °777 °637 °490	'032 '900 '763 '622 '475	*019 *887 *749 *608 *460	*006 *873 *735 *593 *445	*993 *859 *721 *578 *430	*980 *846 *707 *564 *415	°966 °832 °693 °549 °399	.818 .679 .534 .384	.804 .665 .519	'927 '791 '651 '505 '354	13 14 14 15	15 6 7 8 9
20 1 2 3 4	°339 °182 °020 16 °852 °679	*323 *166 *003 *835 *661	308 150 986 817	°292 °133 °970 °800 °625	.:276 :117 :953 :783 :607	.261 .101 .936 .766	°085 °919 °748 °572	*229 *669 *902 *731 *554	·213 ·052 ·886 ·714 ·536	.198 .036 .869 .696	16 16 17 17	20 1 2 3 4
25 6 7 8 9	°500 °315 °125 15 °928 °726	°482 °296 °105 °908 °705	'463 '277 '086 '888 '684	°445 °258 °066 °867 °663	'426 '239 '046 '847 '642	'408 '220 '027 '827 '622	·389 ·201 ·007 ·807 ·601	*371 *182 *987 *787 *580	352 163 967 766 559	'334 '144 '948 '746 '538	19 19 20 20 21	25 6 7 8 9
30 1 2 3 4	°517 °303 °083. 14 °856 °624	°496 °281 °060 °833 °600	'474 '259 '038 '810 '576	'453 '237 '015 '786 '553	'431 '215 '992 '763 '529	'410 '193 '970 '740 '505	'389 '171 '947 '717 '481	·367 ·149 · 924 ·694 ·457	'346 '127 '901 '670 '434	'324 '105 ' 879 '647 '410	21 22 23 23 24	30 1 2 3 4
35 6 7 8 9	386 142 13 892 636 375	'362 '117 '866 '610	'337 '092 '841 '584 '322	'313 '067 '815 '558 '295	°288 °042 °790 °532 °269	°264 °017 °764 °506 °242	'240 '992 '738 '479 '215	*967 *713 *453 *189	'191 '942 '687 '427 '162	.166 .917 .662 .401	24 25 26 26 27	35 6 7 8 9
40 1 2 3 4	12 ·837 ·560 ·278 11 ·992	*809 *532 *249 *963	°055 °782 °504 °221 °934	°027 °754 °475 °192 °905	°000 °726 °447 °164 °876	'973 '699 '419 '135 '847	'946 '671 '391 '106 '817	.643 .363 .078 .788	*891 *615 *334 *049 *759	.864 .588 .306 .021	27 28 28 29	40 1 2 3 4
45 6 7 8 9	'701 '407. '108 10 '807 '502	.672 .377 .078 .777 .471	'642 '347 '048 '746 '441	.613 .317 .018 .716 .410	.583 .287 .988 .685 .379	°554 °258 °958 °655 °349	525 228 927 624 318	'495 '198 ' 897 '594 '287	.466 .168 .867 .563 .256	'436 '138 '837 '533 '226	29 30 30 31 31	45 6 7 8 9
50 1 2 3 4	9 .885 9 .885 574 261 8 .948	'164 '854 '543 '230 '917	133 823 511 198 885	'102 '792 '480 '167 '854	°071 °761 °449 °136 '822	'040 '730 '418 '105 '791	.009 .698 .386 .073 .760	*978 *667 *355 *042 *728	*947 *636 *324 *011 *697	'916 '605 '292 '979 '665	31 31 31 31	50 1 2 3 4

VALUES OF ANNUITIES

OM(5)

ON TWO JOINT LIVES OF EQUAL AGE

		01	1111	- 501.		A Trib		CAL .	AGE		- 04	CENT
x					a_{xx}						Diff.	x
	° 0	.I.	.5	.3	4	. 5	.6	7	.8	.0		
55 6	8 '634	.603 .290	°571	·540 ·227	°509	·478	°446	'415 '102	384	*35 ²	31 31	55 6
7 8 9	·008 7 ·697 ·387	*977 *666 *356	.635 .325	.604 .295	·884 ·573 ·264	·853 ·542 ·233	·821 ·511 ·202	.480 .171	'759 '449 '141	'728 '418 '110	31 31 31	7 8 9
60 1 2 3	6 775 473 176	'745 '443	'018 '715 '414 '117	'988 '684 '384 '088	.654 .354 .059	'927 '624 '325 '030	'897 '594 '295 '000	*866 *564 *265	'836 '533 '235 '942	'805 '503 '206 '912	30 30 30 29	60 1 2 3
4 65 6	5 ·883 ·595 ·312	854 567 284	·825 ·538 ·257	'797 '510 '229	.768 .482 .201	'739 '454 '174	'710 '425 '146	'681 '397 '118	653 369	,624 ,340 ,063	29 28 28	65 6
7 8 9 70	°035 4 °764 °501	'008 '738 '475	'981 '711 '450	'954 '685 '424 '169	.659 .398	'900 '633 '373	*872 *606 *347 *094	'845 '580 '321	'818 '554 '295	.791 .527 .270	27 26 26	7 8 9 70
1 2 3 4	3 '994 '752 '518 '292	729 495 270	'946 '705 '473 '248	'921 '682 '450	·897 ·658 ·428	·873 ·635 ·405 ·183	·849 ·612 ·382 ·161	·825 ·588 ·360 ·139	*044 *800 *565 *337 *118	'019 '776 '541 '315 '096	25 24 23 23 22	1 2 3 4
75 6 7 8 9	°074 2 °865 °664 °472 °289	°053 °845 °645 °454 °272	°032 '825 '626 '435 '254	'011 '805 '606 '417 '237	*990 *785 *587 *399 *219	'970 '765 '568 '381 '202	'949 '744 '549 '362 '184	'928 '724 '530 '344 '167	'907 '704 '510 '326 '149	'886 '684 '491 '307 '132	21 20 19 18	75 6 7 8 9
80 1 2 3 4	'114 1 '948 '790 '641	.097 .932 .775 .627	'081 '916 '760 '613	'064 '901 '745 '599	.048 .885 .730 .585	.869 .716 .571	'014 '853 '701 '556	•998 •837 •686 •542	'981 '822 '671 '528	'965 '806 '656 '514	17 16 15 14	80 1 2 3
85 6 7 8	*500 *367 *242 *125	'487 '355 '230 '114 '005	'473 '342 '219 '103 '995	'460 '330 '207 '092 '984	'447 '317 '195 '081 '974	'434 '305 '184 '070	'420 '292 '172 '059	*407 *280 *160 *048	'394 '267 '148 '037 '933	·380 ·255 ·137 ·026 ·923	13 13 12 11	4 85 6 7 8
9 90 1 2	°913 °817 °73° °647	.903 .808 .722	·894 ·800 ·713 ·632	·884 ·791 ·705 625	·875 ·782 ·697 ·618	·865 ·774 ·689 ·611	·855 ·765 ·680 ·603	·846 ·756 ·672 ·596	·836 ·747 ·664 ·589	·827 ·739 ·655	10 9 8 7	90 1 2
3 4 95	*574 *501 *441	*567 *495	559 489 429	°552 °483 °422	'545 '477 '416	°538 °471 °410	530 465 404	590 523 459 398	509 '516 '453 '391	'581 '508 '447 '385	7 7 6 6	3 4 95
6 7 8 9	379 337 302 252	'375 '334 '297 '247	'371 '330 '292 '241	366 327 287 236	'362 '323 '282 '230	'358 '320 '277 '225	354 316 272	'350' '313 '267	345 309 262	'341 '306 '257 '203	4 4 5 6	6 7 8 9
100	°197	.188	.179	170	.191	152	143	134	125	116	9	100

VALUES OF ANNUITIES

 $O^{M(5)}$

ON THREE JOINT LIVES OF EQUAL AGE

31 PER CENT.

x					a_{xxx}						Diff.	x
	.0	·I	.5	.3	•4	.2	.6	.7	.8	.0	Din.	
10 1 2 3 4	16 '525 '422 '315 '203 '087	°515 °411 °304 °191	°504 °401 °293 °180 °063	'494 '390 '281 '168	'484 '379 '270 '157 '039	'474 '369 '259 '145	'463 '358 '248 '133	'453 '347 '237 '122	'443 '336 '225 '110	'432 '326 '214 '099 '978	10 11 11 12 12	10 1 2 3 4
15 6 7 8 9	15 '966 '841 '710 '575 '434	.954 .828 .697 .561	°941 °815 °683 °547 °405	*929 *802 *670 *533 *390	.789 .656 .519	'904 '776 '643 '505 '361	·891 ·762 ·629 ·490 ·346	·879 ·749 ·616 ·476 ·332	·866 ·736 ·602 ·462 ·317	·854 ·723 ·589 ·448 ·303	13 13 14 14 15	15 6 7 8 9
20 1 2 3 4	·288 ·137 14 ·981 ·818 ·650	°273 °121 '965 '801 '633	°258 °106 °948 °784 °615	°243 °090 °932 °768 °598	*228 *075 *916 *751 *581	°213 °059 °900 °734 °564	.197 .043 .883 .717 .546	182 28 867 700 529	.167 .012 .851 .684	*152 *997 *834 *667 *494	15 16 16 17 17	20 1 2 3 4
25 6 7 8 9	'477 '297 '112 13 '921 '725	°459 °279 °093 °901 °705	°441 °260 °074 '882 '684	'423 '242 '055 '862 '664	'405 '223 '036 '843 '644	'387 '205 '017 '823 '624	.369 .186 .997 .803	351 168 978 784 583	333 149 959 764 563	'315 '131 '940 '745 '542	18 19 19 20	25 6 7 8 9
30 1 2 3 4	°522 °314 °099 12 °879 °653	°501 °293 °077 °856 °630	°480 °271 °055 °834 °607	°460 °250 °033 '811 °584	'439 '228 '011 '789 '561	'418 '207 '989 '766 '538	397 185 967 743	376 164 945 721 491	356 142 923 698 468	'335 '121 '901 '676 '445	21 22 22 23 23	30 1 2 3 4
35 6 7 8 9	11 '942 '185 '11 '942 '695 '443	398 161 917 670 417	'375 '136 '893 '645 '391	351 112 868 619	*327 *088 *843 *594 *340	304 064 819 569	°280 °039 °794 °544 °288	°256 °015 °769 °519 °262	'232 '991 '744 '493 '237	'209 '966 '720 '468	24 24 25 25 26	35 6 7 8 9
40 1 2 3 4	185 10 '923 '657 '386 '112	*159 *896 *630 *359 *084	°133 ·870 ·603 ·331 ·057	°106 ·843 ·576 ·304 ·029	.080 .817 .549 .276 .001	'054 '790 '522 '249 '974	.028 .763 .494 .222 .946	°002 '737 '467 '194 '918	'975 '710 '440 '167 '890	.684 .413 .139 .863	26 27 27 27 28	40 1 2 3 4
45 6 7 8 9	9 *835 *554 *271 8 *986 *698	·807 ·526 ·243 ·957 ·669	'779 '497 '214 '928 '640	'751 '469 '186 '900 '612	723 441 157 871 583	.695 .413 .129 .842 .554	*666 *384 *100 *813 *525	638 356 072 784 496	.610 .328 .043 .756 .468	'582 '299 '015 '727 '439	28 28 29 29 29	45 6 7 8 9
50 1 2 3 4	7 ·830 •540 •251	'381 '091 '801 '511 '222	'352 '062 '772 '482 '193	'323 '033 '743 '453 '165	°294 °004 °714 °424 °136	'265 '975 '685 '396 '107	'236 '946 '656 '367 '078	207 917 627 338 049	'178 '888 '598 '309 '021	'149 '859 '569 '280 '992	29 29 29 29 29	50 1 2 3 4

VALUES OF ANNUITIES

 $O^{M(5)}$

ON THREE JOINT LIVES OF EQUAL AGE

x	α_{xxx}											x
	.0	.ı	.5	.3	. 4	°5	.6	. 7	.8	.0	Diff.	
55	6 '963	°934	.906	.877	.849	.820	.791	.763	. 734	.706	29	55
6	.677	649	.620	592	'563	535	.206	478	449	421	29 28	6 7
7 8	39 ²	°364	°336	°308 °028	*280 *000	·252	°223	.195	·167	.139	28	8
9	5 .833	.806	.778	751	.723	.696	.668	.641	.613	.586	28	9
60	.558	.231	.504	477	*450	423	395	.368	'341	.314	27	60
1	1287	.591	°234	.208	.181	155	128	102	.075	'049	27	1
3	°022 4 °761	.996	.970	. 685	.018	·8 92	.608	·839 ·583	.813	787	26 26	3
4	4 '761 '506	.736 .481	'710 '456	°431	·659	*382	357	332	°557	°532	25	4
65	257	233	'209	184	.160	.136	1112	.088	.063	.039	24	65
6	.012	.001	.968	944	.021	.897	.873	.850	.826	.803	24	6
7	3 '779	756	733	'710	.687	665	642	.619	*596	573	23	7
8 9	328	·528 ·307	°506	'483 '264	'461 '242	439	'417 '200	.395 .178	372	.320	22 21	8 9
70	'114	'093	.073	052	.035	.011	.000	'970	.949	.029	21	70
1	2 '908	.888	.868	.848	.828	.809	.789	.769	749	729	20	1
2	.709	.690	.671	.652	.633	614	·595	.576	557	538	19	2
3	.219	,201	483	°464 °285	°446 °267	428	410	39 ²	373	355	18	3 4
4	'337 '162	'320	302			250	.062	.046	.020	013	17	75
75 6	1 996	°145	964	949	*933	°079	901	.885	870	854	16	6
7	.838	.823	.808	793	.778	.763	.748	733	.718	'703	15	7
8	.688	.674	.660	.645	.631	617	.603	.289	574	.260	14	8
9	546	533	.219	.206	492	479	*466	452	439	425	13	9
80	°412	399 274	387	374	'362 '238	349	336	'324 '203	.311	299	13	80
2	167	156	145	134	123	112	,100	.089	.078	.067	11	2
3	056	.046	.032	.022	'014	1004	.093	.083	.972	'962	II	3
4	0 .021	.941	932	922	'912	.903	.893	:883	.873	864	10	4
85	.854	.845	*836	827	.818	.809	.800	791	·782 ·696	·773 ·688	9	85 6
6 7	·764 ·679	·756	'747 '664	'739 '656	.73° .648	641	633	·705	617	.610	8	7
8	'602	595	.588	.281	574	.567	559	552	545	.238	7	8
9	.231	524	.218	.211	.504	.498	.491	.484	477	°47 I	7	8
90	*464	'458	452	446	'440	435	'429	423	417	'411	6	90
$\begin{vmatrix} 1 \\ 2 \end{vmatrix}$	·405 ·349	399	394	335	383	377	371	366	360	355	5	2
3	349	°344 °296	292	287	.282	278	273	268	263	259	5	3
4	. *254	250	247	243	'239	236	1232	.558	'224	.551	4	4
95	217	.513	.209	.202	201	1197	193	.189	185	.181	4	95
6 7	177	175	172	170	167	165	162	.190	157	.136	3 2	8 7
8	152	131	140	147	145	143	141	139	130	109	3	8
9	,106	.103	.101	098	.092	.093	.090	.087	.084	.082	3	9
100	.079	.075	.070	.066	.062	.028	.023	.049	.045	.040	4	100
1	.036											1
-				·		-						

VALUES OF ANNUITIES

 $0^{M(5)}$

ON FOUR JOINT LIVES OF EQUAL AGE

	$lpha_{xxxx}$											
x	·0	ï	2	3	4	·5	.6	.7	.8	.0	Diff.	x
10 1 2 3 4	14 ·881 ·786 ·687 ·583 ·475	·872 ·776 ·677 ·572 ·464	·862 ·766 ·666 ·561 ·452	·853 ·756 ·656 ·551 ·441	·843 ·746 ·645 ·540 ·429	·834 ·737 ·635 ·529 ·418	·824 ·727 ·625 ·518 ·407	·815 ·717 ·614 ·507 ·395	·805 ·707 ·604 ·497 ·384	'796 '697 '593 '486 '372	10 10 11	10 1 2 3 4
15 6 7 8 9	°361 °244 °121 13 °994 °862	'349 '232 '108 '981 '848	'338 '219 '096 '968 '834	°326 °207 °083 °954 °821	°314 °195 °070 '941 '807	'303 '183 '058 '928 '793	°291 °170 °045 '915 '779	°279 °158 °032 °902 °765	.267 .146 .019 .888 .752	°256 °133 °007 '875 '738	.12 12 13 13	15 6 7 8 9
20 1 2 3 4	°724 °581 °433 °279 °119	°710 °566 °418 °263 °103	'695 '551 '402 '247 '086	°681 °537 °387 °231 °070	.667 .522 .371 .215	'653 '507 '356 '199 '037	638 492 341 183	.624 .477 .325 .167 .004	.610 .463 .310 .151	595 448 294 135	14 15 15 16	20 1 2 3 4
25 6 7 8 9	12 °954 °784 °607 · 425 °237	937 766 589 406	'920 '749 '571 '387 '198	*9°3 *731 *552 *369 *179	*886 *713 *534 -350 *160	.869 .696 .216 .331 .141	·852 ·678 ·498 ·312 ·121	.835 .660 .480 .293	.818 .642 .461 .275 .083	'801 '625 '443 '256 '063	17 18 18 19	25 6 7 8 9
30 1 2 3 4	°044 11 °845 °640 °430 °214	°024 °825 °619 °408 °192	.004 .804 .598 .387 .170	'984 '784 '577 '365 '148	'964 '763 '556 '344 '126	'945 '743 '535 '322 '104	'925 '722 '514 '300 '081	*905 *702 *493 *279 *059	·885 ·681 ·472 ·257 ·037	*865 *661 *451 *236 *015	20 21 21 22 22	30 1 2 3 4
35 6 7 8 9	10 '993 '767 '536 '300 '059	'970 '744 '512 '276 '035	'948 '721 '489 '252 '010	°925 °698 °465 °228 °986	°9°3 °675 °442 °2°4 °961	.880 .652 .418 .180	*857 *628 *394 *155 *912	*835 *605 *371 *131 *888	'812 '582 '347 '107 '863	79° 559 324 083 839	23 23 24 24 25	35 6 7 8 9
40 1 2 3 4	9 ·814 ·565 ·312 ·056 8 ·797	.789 .540 .286 .030 .771	.764 .514 .261 .004 .744	.739 .489 .235 .978 .718	.714 .464 .210 .952 .692	.690 .439 .184 .927 .666	.665 .413 .158 .901 .639	.640 .388 .133 .875 .613	*615 *363 *107 *849 *587	*590 *337 *082 *823 *560	25 25 26 26 26	40 1 2 3 4
45 6 7 8 9	°534 °270 °003 7 °735 °467	.508 .243 .976 .708 .440	'481 '217 '949 '681 '413	'455 '190 '923 '655 '386	*428 *163 *896 *628 *359	*4°2 *137 *869 *6°1 *332	*376 *110 *842 *574 *305	*349 *083 *815 *547 *278	323 056 789 521 251	296 30 7 62 494 224	26 27 27 27 27	45 6 7 8 9
50 1 2 3 4	197 6 928 659 390	.170 .901 .632 .363	°143 °874 °605 °337 °071	°116 °847 °578 °310 °045	.089 .820 .551 .284 .018	.063 .794 .525 .257 .992	.036 .767 .498 .230 .965	.009 .740 .471 .204	.982 .713 .444 .177 .912	.686 .686 .417 .151 .886	27 27 27 27 27 27	50 1 2 3 4

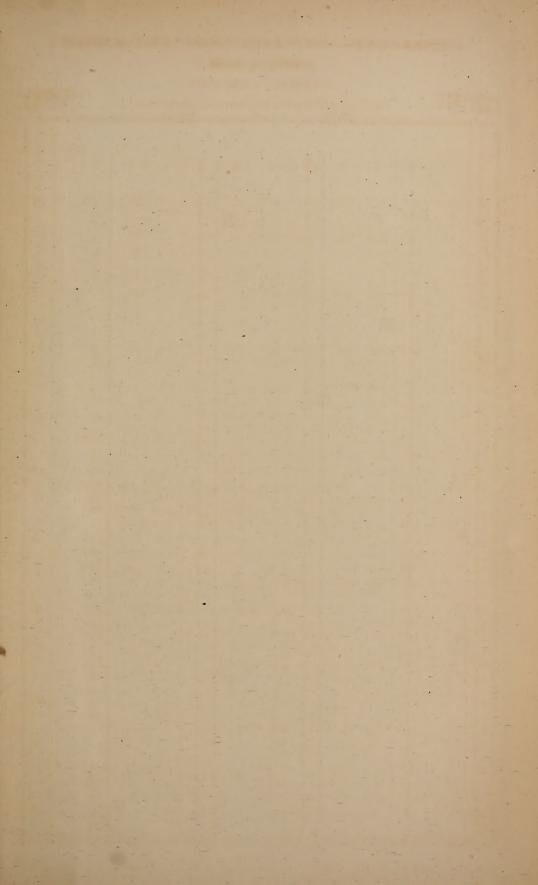
VALUES OF ANNUITIES

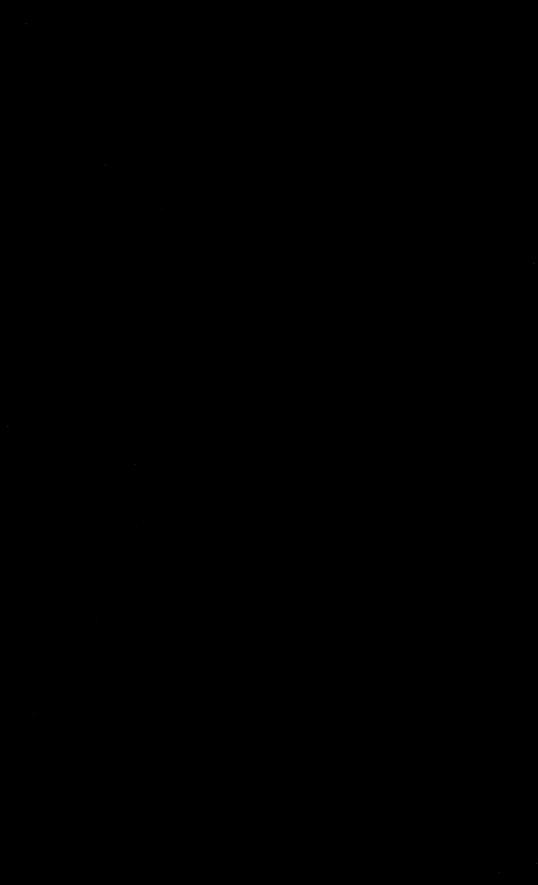
 $\mathbf{O}^{\mathbf{M}(5)}$

ON FOUR JOINT LIVES OF EQUAL AGE

 $3\frac{1}{2}$ PER

												CENT.
$\begin{bmatrix} x \end{bmatrix}$					a_{xxx}	x					Diff.	x
	.0	.I	.2	.3	.4	.22	.6	.7	.8	.0		
55 6	5 ·859 ·597	·833	·807	.780 .519	'754 '493	°728 °468	'702 '442	·676 ·416	·649	·623	26 26	55 6
7	.338	'312	287	,561	·236	210	184	159	.133	.108	26	7
8	*082	.057	'032	.006	.081	956	°931	.006	.880	*855	25	8
9	4 .830	805	.781	.756	.731	.707	.682	.657	.632	.608	25	9
60	.583	559	.535	.210	. 486	°462	·438	414	'389	.365	24	60
1	*341	317	294	270	.246	*223	199	175	.121	128	24	1
2	104	.081	.058	.034	110,	.088	965	'942	.018	.895	23	2
3	3 .872	.850	827	*805	.782	.760	737	715	692	.670	23	3
4	.647	.625	.603	.281	* 559	.238	316	'494	472	°45°	22	4
65	.428	407	*386	.364	*343	322	.301	'280	.258	237	2 I	65
6 7	'216	.196	175	155	134	114	.093	.073	·052 ·852	.032	21	6 7
8	2 .812	'991	'971	'951	.931	'912	.892	·8 72 ·679	.660	·832	20 19	8
9	.622	·604	.585	.267	.548	.530	.212	493	475	456	18	9
70	*438	420	403	385	·368	.350	.332	315	297	.280	18	70
1	262	*245	228	212	195	178	.191	144	128	III.	17	1
2	.094	.078	.062	.046	.030	·014	.998	982	-966	.020	16	2
3	I '934	.919	.903	.888	.873	.858	.842	.827	.812	.796	15	3
4	•781	.767	752	738	723	.709	.694	.680	.665	.621	15	4
75	· 63 6	.622	.609	*595	°581	°568	554	540	.526	.213	14	75
6	. 499	. 486	473	.460	447	*434	*42I	·408	395	382	13	6
7	*369	357	344	*332	.320	.308	295	.583	271	258	12	7
8 9	246	235	223	'212	*088	.189	.066	.199	154	143	12	8 9
	.131	120	.100	.099		.077		.022	.045	.034	II	
80	023	.013	.003	992	·982 ·883	.874	.865	.852	°941	. 836	10	80
2	0 '921 '827	'912 '818	'902 '809	.893 .801	792	783	*774	·765	*846 *757	748	9	2
3	739	'731	723	714	792	.698	.690	682	673	.665	8	3
4	.657	.650	642	.635	.627	.620	.612	.605	597	.290	8	4
85	•582	575	.568	.261	554	547	.540	533	.526	.219	7	85
6	512	.206	499	493	486	.480	474	.467	·461	454	6	6
7	•448	'442	.436	.431	425	419	413	.407	'402	.396	6	7
8	.390	'385	'379	374	'369	*364	358	353	*348	'342	5	8
9	*337	*332 ·	327	.322	'317	.313	.308	.303	.298	*293	5	9
90	•288	284	279	275	·27 I	*267	.262	258	254	*249	4	90
1 2	245	241	237	233	'229	225	221	217	213	209	4	1 2
3	°205	'202	.198	162	192	.126	185	182	179	175	3	3
4	1/2	.138	135	102	.130	.128	125	123	140	113	3	4
95	115	113	.110	.108	105	103	.100	.098	.095	.093	3	95
6	'090	.088	.087	.085	.084	.082	.080	·079	.077	.076	2	6
7	.074	.073	.072	.071	.070	'069	'067	.066	.065	.064	I	7
8	.063	.001	.090	.028	.057	*055	.023	'052	050	.049	2	8
9	.047	.046	.044	.043	'041	*040	•039	.037	.036	°034	I	9
100	.033	.031	.029	'027	.022	.023	*020	,018	.019	'014	2	100
1	'012			• • •		•••	•••			• • •	•••	1
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